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CHAPTER 3. STANDARD TERMINAL INSTRUMENT FLIGHT PROCEDURES

SECTION 1. GENERAL

300. PURPOSE

This chapter provides the Flight Procedures Specialist with a detailed explanation of the FAA's Terminal Instrument Flight Procedure program and prescribes the policies, processes, and procedures for standardized accomplishment of Regional Flight Procedures Office(s) responsibilities. Overview information for other instrument procedures is included where appropriate because of their strong relationships and associations with terminal instrument procedures. Detailed guidance material for the other instrument procedures associated with or related to terminal procedures are contained in chapter 4.

All of the provisions, procedures, and figures presented in this chapter are intended to be an aid to the Flight Procedures Office specialist and should not be construed as the only course of action. They should NEVER be used to circumvent good common sense and sound aeronautical judgement based upon knowledge gleaned from practical experience and education in subject matter(s) relating to the topic presented herein. Each regional FPO must respond according to their individual needs and practices. It is recognized that automation in the SIAP development program/process may alter, negate, or eliminate some of the processes described in this handbook.

301. Background.

The Federal Aviation Act of 1958 (FA Act), and subsequent amendments, legislates the FAA's responsibility for maintaining a safe National Airspace System (NAS). The development of Terminal Instrument Procedures represents a major undertaking in meeting this requirement of the FA Act. The Terminal Instrument Procedures include standard instrument approach procedures for instrument approaches to United States airports (including Heliports and "Point-in-Space" sites) and the weather minimums that apply to takeoffs and landings in IFR conditions at those facilities, and the establishment of instrument departures. NOTE: All references to airports and runways in this chapter also include Heliports and other landing sites as approved for IFR flight operations.

302. STATUTORY BASIS FOR THE STANDARD TERMINAL INSTRUMENT FLIGHT PROCEDURES PROGRAM

A list of applicable Orders, Advisory Circulars, FAR's and other pertinent documents can be found in Appendix II of this chapter.

303. REGULATORY BASIS FOR STANDARD INSTRUMENT APPROACHES (SIAP)

The Administrator implements the provisions of the Federal Aviation Act and other Acts by adoption of various FAR's. The following FARs cover subjects involved in or associated with the development of Standard Terminal Instrument Procedures.

304. FAA INTERNAL DIRECTIVES AND PROCESSES

The procedures for accomplishing the Standard Instrument Approach program incorporated in the FAA's internal orders are based on the laws passed by the Congress and the FARs issued by the FAA. Proper application of these directives requires that Flight Procedures Office (FPO) personnel maintain a working knowledge and basic understanding of terminal and en route instrument procedures. It may also include the Facilities and Equipment (F&E) program and process, the Obstacle Evaluation (OE) program and process and Non-rulemaking Actions. The following documents are the reference sources most frequently used by the Flight Procedures Office specialists.

a. Flight Procedures Office Handbook

The Flight Procedures Office Handbook (this document) is the primary FPO guidance concerning administration of the Standard Terminal Instrument Procedures program. It provides policy, standards and procedures necessary for Flight Procedures Office personnel to perform all functions required for effective administration of the program. Each chapter contains procedures and processes for accomplishing various elements or segments of the program.

b. Terminal Instrument Procedures, Handbook 8260.3B

This handbook contains criteria used to formulate, review, approve, and publish procedures for instrument approach and departure of aircraft to and from civil and military airports. These criteria are applicable at any location over which an appropriate United States agency exercises jurisdiction.

c. Flight Procedures and Airspace, Handbook 8260.19 (as amended)

This handbook provides guidance for Office of Aviation System Standards (AVN) personnel for the administration and accomplishment of the Flight Procedure and Airspace program.

d. Order 8200.1, United States Standard Flight Inspection Manual

This order contains policy, criteria and procedures for the flight inspection of navigational aids and instrument flight procedures.

e. Order 7400.2(as amended),Procedures for Handling Airspace Matters

This order prescribes policy, criteria, and procedures applicable to Air Traffic Rules and Procedures Service, Program Engineering and Maintenance Service, Systems Engineering Service, Office of Airport Planning and Programming, Office of Airport Standards, and the Flight Standards Service. It also applies to all regional and field organizational elements involved in rule making and non rule making actions associated with airspace allocation and utilization, obstruction evaluation, obstruction marking and lighting, airport airspace analysis, and the establishment of air navigational aids.

f. Order 7031.2, Airway Planning Standard Number One (APS-1)

This order contains criteria for determining the eligibility of specific locations and runways for various types of navigational

aids. The Benefit-Cost Ratios (BC or BCR) can be calculated using the criteria in this order.

g. Other Directives

Other internal directives in the form of Advisory Circulars and Orders containing information relative to the Standard Instrument Approach program are routinely issued and should be used as necessary. Flight Procedures Office personnel should review periodic distributions of the agency Directives Checklist to identify directives applicable to their assigned functions. It is also important that their review identify directives no longer applicable because of cancellation. The specialists should know or determine the reason for cancellation of applicable directives because the action usually follows incorporation or consolidation of the material into another directive. This may cause extensive changes in the way procedures and processes are conducted or significant changes in data or other specifications pertaining to this subject.

305. POLICY AND OBJECTIVES

It is the policy of the Aviation System Standards (AVN), that processing of Standard Instrument Approaches will display the following characteristics.

a. Coordination Responsibilities

FPO personnel understand their own responsibilities and have at least a basic understanding of, and respect for the responsibilities of the other organizations involved in the Standard Terminal Instrument Procedures program.

b. Consistency, Accuracy, and Completeness

The coordination/review packages and response packages prepared by FPO personnel are accurate, complete, and timely thus minimizing or avoiding problems, delays, and negative impacts on others.

c. Effective and efficient Process

The processing and handling of each Standard Terminal Instrument Procedure is assigned appropriate priority. This priority is usually determined by the State Aviation Officials, but may be assigned by the FPO when necessary. The degree of complexity is a primary consideration in the assignment of personnel. The significance of the program and potential impacts on users are understood by all and they strive to achieve and maintain an effective and efficient process.

d. Overall Understanding of the Process

All Flight Procedures Office personnel must have at least a basic understanding of the SIAP coordination and review process, the Obstruction Evaluation (OE) process, the Facilities and Equipment (F&E) process, and the Non-rulemaking Actions (NRA) process.

e. Management and Control of the Process

FPO personnel manage and control their processing of Terminal Instrument Procedures in a timely and responsive manner. They maintain an awareness of how delays in their processing activities impact others.

306. ORGANIZATIONAL RESPONSIBILITIES

The Flight Standards Service (AFS) is responsible for the establishment and maintenance of terminal and en route flight procedures. The director has final authority to issue, amend, and terminate rules and regulations relating to standard terminal instrument procedures and minimum equipment requirements. They also provide criteria/standards for SIAP development. The Office of Aviation System Standards (AVN) provides procedures development, and procedures flight inspection support services as required by the Flight Standards Service.

a. Flight Technologies and Procedures Division (AFS-400)

This division is the principal element of the Flight Standards Service governing policies for establishing and maintaining terminal and en route flight procedures, and, for using air navigation facilities, appliances, and systems. The division is responsible for approval/disapproval of requests for waivers of standards.

b. Flight Procedures Standards Branch (AFS-420)

This branch is the principal element within the Technical Programs Division with respect to the development of national policies concerning application of standards and criteria for overall accomplishment of the Flight Procedures Program and serves as the focal point within the Flight Standards Service for all matters relating to airspace and cartographic programs. This branch is the division focal point for approach aids, obstruction criteria, and approach procedures. This branch is responsible for the review and evaluation of waiver requests and the development of recommendations for final division action.

c. Flight Technology Requirements Branch (AFS-430)

This branch is the principal element of the division for direction, control, and execution of complex technical projects and is responsible for the approval of Category II/III landing minimums.

d. Air Carrier Operations Branch (AFS-220)

This branch is the principal element within the Air Transportation Division (AFS-200) with respect to the development of Standard Operations Specifications and the approval of U.S. air carriers to use instrument flight procedures at foreign airports.

e. Regional Flight Procedures Office

Each region has a Flight Procedures Office (FPO). The FPO is responsible for all civil instrument procedures within the region's geographic area. In addition, the FPO is responsible

for the military procedures for which the FAA, through appropriate agreements and orders, has assumed procedure development responsibilities. In most cases, these are Army and Air Force approach and departure procedures and other military procedures at civil fields. The FPO is the focal point for establishing and maintaining Standard Instrument Approach Procedures in accordance with applicable criteria and standards. Optimizing the distribution and utility of these valuable resources requires careful evaluation of SIAP needs, and benefits to the public. Specific major responsibilities are:

(1) Advises and assists all major operating Divisions within the regions relative to requirements for flight inspection services.

(2) Plans and coordinates the Flight Procedures and Airspace Program for the region by applying national policies, standards, and criteria.

(3) Conducts and coordinates instrument procedure feasibility studies.

(4) Evaluates requests for new instrument procedures and determines eligibility for approval. Coordinates eligible requests with appropriate regional organizations. If approved, provides data, supporting documentation, regional priority, and instructions for development to the appropriate AVN-100 Branch.

(5) Determines requirements for waivers of criteria to resolve special or unique operational problems. Submits justifications and recommends options for meeting the equivalent level of safety provided by standard application of all required criteria.

(6) Evaluates and processes industry comments on instrument procedures.

(7) Coordinates foreign instrument procedures programs in accordance with FAA Order 8250.31, Foreign Terminal Instrument Procedures.

(8) Assists with the plans and coordinates new or relocated navigational aids.

(9) Coordinates with regional divisions and the appropriate AVN organization to specify a charting date consistent with priorities and workload, when a component of the National Airspace System (NAS) is to be commissioned, decommissioned, or altered.

(10) Provides input and assists in the planning and development of regional F&E budget submissions and programming actions.

(11) Analyzes all obstruction evaluations to determine the effects on flight operations, landing minimums, or flight altitudes of all civil and U.S. Army instrument procedures.

(12) Evaluates regional airport and airspace cases.

TYPES OF TERMINAL INSTRUMENT PROCEDURES: Terminal instrument procedures consist of three major categories or divisions. These are approach procedures, departure procedures, and other terminal procedures primarily used by Air Traffic Control (ATC). Each category contains several types of specific procedures and a brief overview of the various types is provided in the following paragraphs. The criteria for developing approach and departure categories of procedures are defined in TERPS. Guidance for some specific types of procedures within each category may be contained in other FAA orders, directives, and/or Federal Aviation Regulations (FAR's) and those references are identified when appropriate.

307. Instrument Approach Procedures

An instrument approach procedure is a series of predetermined maneuvers for the orderly and safe transition of an aircraft under instrument flight conditions, from the beginning of the initial approach to one of the following:

- (1) An automatic landing.
- (2) A position from which a landing can be made visually.
- (3) A position from which a missed approach can be executed and completed if external visual references necessary to complete the landing are not established before passing the Decision Height (DH), Minimum Descent Altitude (MDA), or the Missed Approach Point (MAP).

a. Types of Instrument Approach Procedures

An instrument approach and its operating minimums are usually approved for a specific airport and/or runway by the aviation authority that has jurisdiction over flight operations at that airport. The FAA is responsible for developing all civil instrument approach procedures and for specifying the operating minimums in the U.S., its territories, and the U.S. Army instrument approach procedures worldwide. In the case of other military instrument approaches, an instrument approach and its operating minimums are prescribed and approved for a specific airport and/or runway by the authority having jurisdiction over flight operations. The various types of instrument approaches that must or may be developed and approved include:

- (1) Instrument approach procedures published in accordance with FAR Part 97.
- (2) Instrument approach procedures authorized in operations specifications.
- (3) FAA-approved special instrument approach procedures.

(4) Department of Defense (DOD) instrument approach procedures at military airports.

(5) Instrument approach procedures published by a foreign country.

(6) Instrument approach procedures developed by an air carrier for use in a foreign country in accordance with FAA Order 8260.31B.

b. Special Instrument Approach Procedures (SIAPS)

Approach procedures are referred to by two acronyms: Standard Instrument Approach Procedures (SIAP's) and Instrument Approach Procedures (IAP's). Some FAA documents use either or both acronyms but the proper acronym is SIAP because it is used in FAR Part 97 and is printed on the procedures' forms (8260 series). SIAP's can be further broken down into two different groups: non-precision and precision.

(1) Non-precision SIAP's provide horizontal approach guidance to a minimum descent altitude (MDA). Some examples of non-precision SIAP's are non-directional beacon (NDB), VOR, GPS, and area navigation (RNAV).

(2) Precision SIAP's provide horizontal and vertical approach guidance to a decision height (DH). Examples of precision SIAP's are instrument landing system (ILS), microwave landing system (MLS), and precision approach radar (PAR). Most precision SIAP's also provide for a non-precision approach in the same procedure design. Examples are localizer (LOC), azimuth (AZ), and surveillance approach radar (SAR).

308. Instrument Flight Rules (IFR) Takeoff Minimums and Departure Procedures

"Departure procedures" is a commonly used term but the proper term is Instrument Flight Rules (IFR) Take-off Minimums and (Obstacle) Departure Procedures. TERPS chapter 12 and FAA Order 8260.46, Instrument Departures Procedure (DP) Program contain the criteria for departure procedures. A departure evaluation is required for each runway or takeoff of an IFR airport/heliport and based on that evaluation, takeoff minimums are developed and, if required, a departure procedure is established. Additional criteria for RNAV and FMS departures can be found in FAA Orders 8260.44, Civil Utilization of Area Navigation (RNAV) Departure Procedures, and 8260.40, Flight Management System (FMS) Instrument Procedures Development.

309. CHARTING TERMINAL PROCEDURES

The efficient and timely management of the SIAPS and procedure requests requires a basic understanding of the processes for publishing SIAP's. This paragraph provides general information about the charting process.

a. Civil SIAP's

The completed procedure is documented on the appropriate 8260 series form. Order 8260.19C contains detailed descriptions of these forms and instructions for completing them. Copies of the completed 8260 forms are coordinated with the FPO and other organizations involved in various aspects of the SIAP Program. The original is then sent to the National Flight Data Center (NFDC). Automated procedural forms developed on the Instrument Approach Procedure Automation (IAPA) system may (when approved and authorized by proper authorities) be forwarded to NFDC electronically.

(1) NFDC accomplishes various data checks on the completed 8260 and establishes a charting date. After all checks, including any necessary flight inspections are satisfactorily completed, NFDC forwards the procedure to the National Ocean Service (NOS) for charting.

(2) NOS is responsible for publishing and distributing the charts on the established dates. Reciprocal agreements exist between NOS and the Defense Mapping Agency Aerospace Center, (DMAAC) for meeting military requirements for civil approach charts.

(3) Commercial charting organizations also have access to the procedures' 8260 forms to meet their charting needs.

(4) Charting dates are established on a 56-day cycle for a complete publishing of the procedures' booklets. Order 8260.26, (as amended) Establishing and Scheduling Instrument Approaches Effective Dates contains information concerning the publication process, publication cycle and cutoff dates for procedures to be forwarded to NFDC.

(5) Order 8260.26 includes provisions where specified procedures may be forwarded to NFDC with a proposed or tentative publication date. These procedures can be made ready for publication and can be quickly activated after successful flight inspection. This provision decreases the processing time for new SIAP's and allows publication and use of newly commissioned facilities at the earliest possible date consistent with completed flight inspection and the 56/28 day publication cycle.

b. Military SIAP's

The coordination of military procedures is similar to civil procedures but they are also forwarded to the appropriate military organization in accordance with FAA Order 8260.15, U.S. Army Terminal Instrument Procedures Service, and Order 8260.32, U.S. Air Force Terminal Instrument Procedures Service. After appropriate military review, the 8260 forms are forwarded to NFDC for Army procedures and DMAAC for Air Force procedures. DMAAC also has a 56-day charting cycle.

c. Special Procedures

The FAA may develop a procedure for use by only one operator or group of operators. These are special procedures (sometimes referred to as private procedures) that may require the establishment of reimbursable agreements between the requestor/sponsor and FAA. FAA policy requires that private charting agencies accomplish charting of special SIAP's. The 8260 form used for special SIAP's must be approved by the appropriate Flight Standards Division/Branch. The SIAP is then forwarded to the operator through the appropriate Flight Standards personnel, normally the principal operations inspector (POI) or the Flight Standards Division All Weather Operations Program Manager (AWOPPM).

d. Other than SIAP Charting

NOS charts alternate minimums from information on the 8260 SIAP forms. For other than standard takeoff minimums (and departure procedures), a separate 8260 form is used and a separate listing is used in the SIAP booklets. Radar approach procedure minimums are also published in a separate listing even though these are considered SIAP's and are documented on 8260 SIAP forms.

310. PROCESSING STANDARD INSTRUMENT PROCEDURES

SIAP processing varies with the type of procedure requested or being developed. A complete description of the process is included in the chapter pertaining to a specific type of SIAP. The process consists of three major phases.

a. Eligibility Phase

Review to determine if a specific procedure meets agency criteria for committing resources to establish a SIAP.

b. Approval Phase

Completion of feasibility study to determine benefits. Coordination with other regional divisions for input to ensure the procedure will be compatible with existing or planned utilization of controlled airspace, existing or planned Airport Improvement Program (AIP) projects, existing or planned F&E projects, and comply with FAA environmental policies.

c. Formulation Phase

Detailed development of the procedure in accordance with applicable agency criteria and publication as appropriate.

Simplified flow charts of the generic process are included in Figures 309-1 through 309-3.

PUBLIC USE APPROACH PROCEDURE PROCESS - ELIGIBILITY PHASE

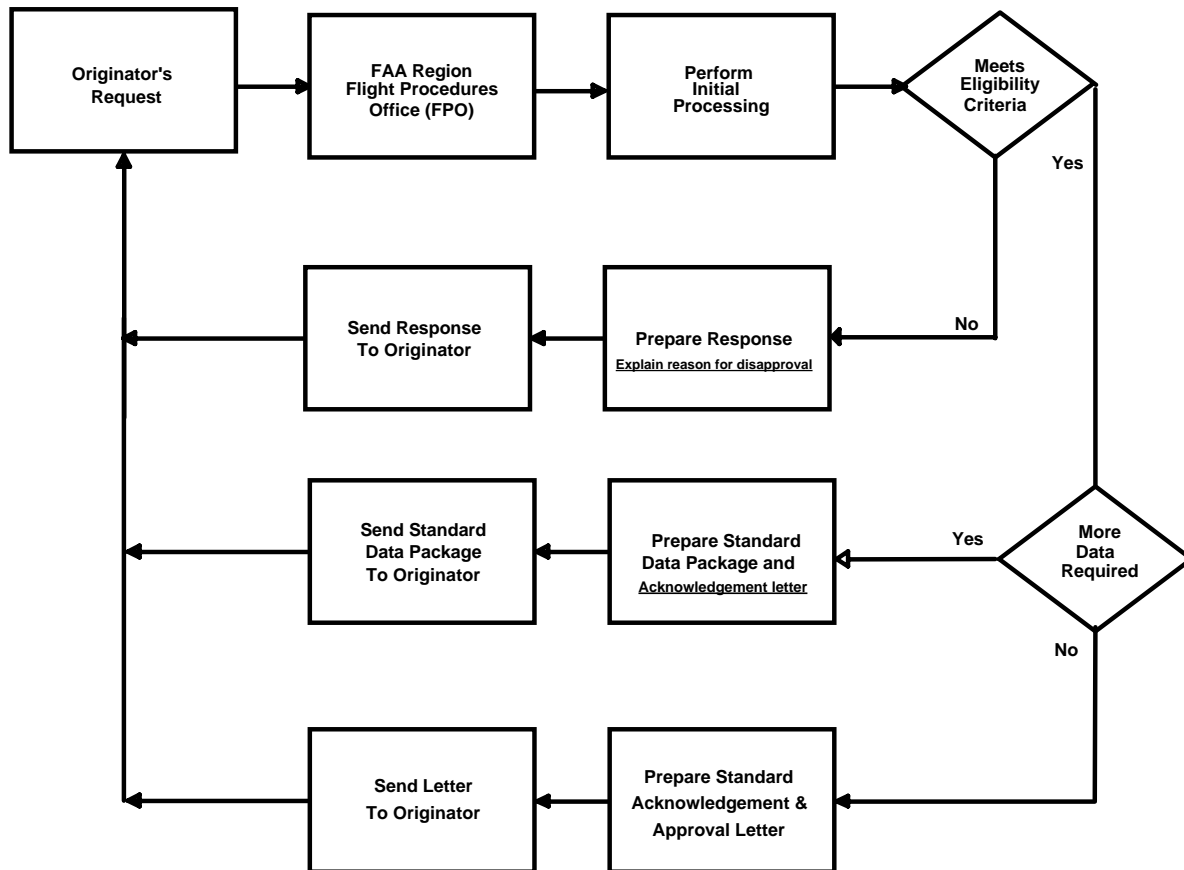


FIGURE 309-1

PUBLIC USE APPROACH PROCEDURE DEVELOPMENT PROCESS - APPROVAL PHASE

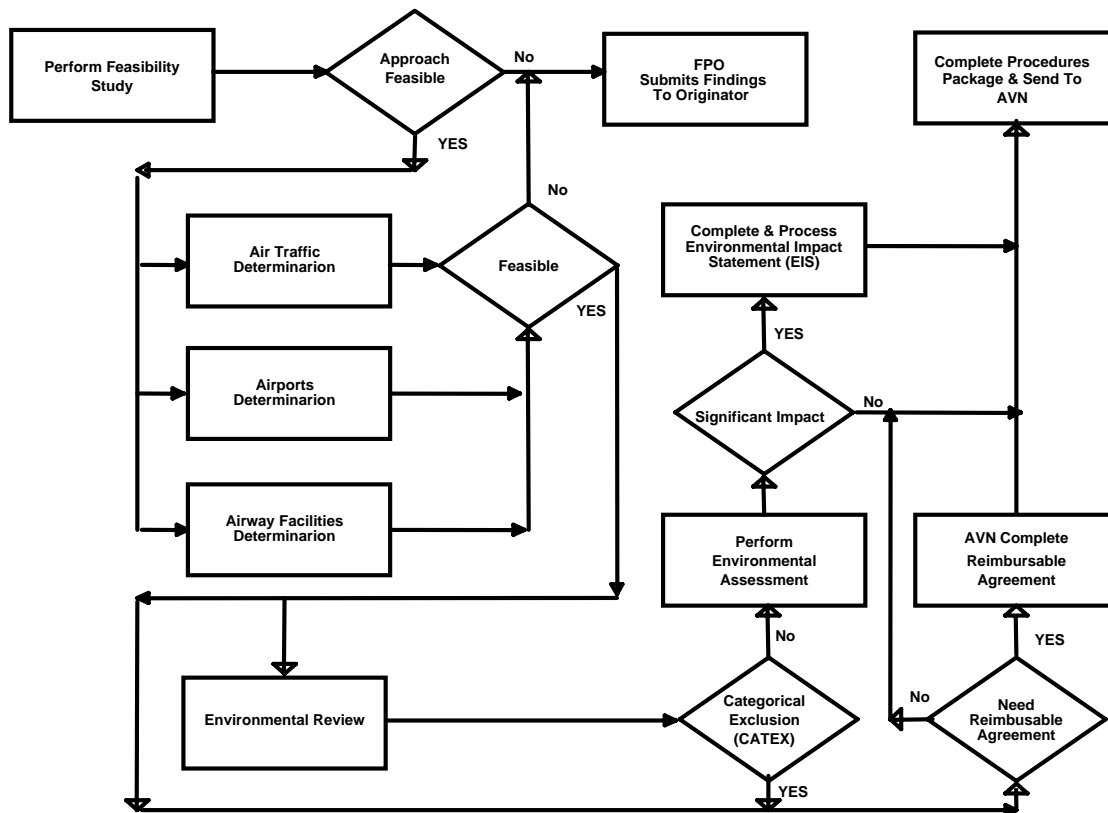


FIGURE 309-2

**PUBLIC USE APPROACH PROCEDURE DEVELOPMENT PROCESS-
FORMULATION PHASE**

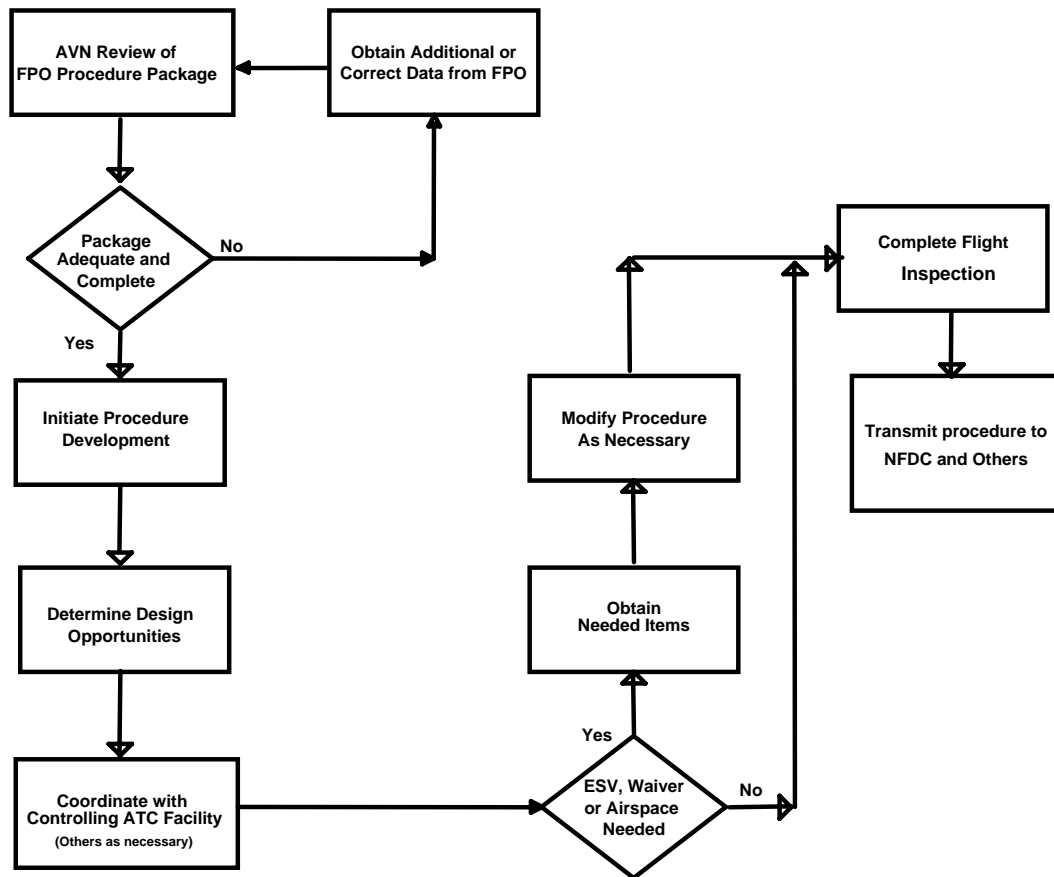


FIGURE 309-3

311-319. RESERVED

Section 2. PUBLIC STANDARD INSTRUMENT APPROACHES

320. GENERAL

This section contains the policy, procedures and processes for establishing Public Standard Instrument Approaches (SIAP) based on existing Federal Nav aids, proposed Federal Nav aids, existing Non-Federal Nav aids, and proposed Non-Federal Nav aids. A public procedure is one that is published in the Federal Register under FAR Part 97 and is available to all users. In the interest of clarity, this section is structured by the three major phases (Eligibility, Approval, and Formulation) of the SIAP establishment process and the major activities within each phase.

Note: Significant References and Interfaces (See Appendix II)

321. ELIGIBILITY PHASE

The Eligibility Phase is probably the most critical phase in the entire process. It starts when the regional Flight Procedures Office receives a request for a SIAP. The request can be made by any aviation source - FAA Organizations, other Federal Government Organizations, State Aviation organizations, Commercial Operators, Air Carriers, Air Taxi Operators, Airport Authorities, Corporate Chief Pilots, (acting as the corporations representative). This phase ends:

- (1) When the FPO has concluded that the approach will be beneficial to the public.
- (2) When the requestor has supplied all the required data.
- (3) When all data has been verified to be correct.
- (4) When the requestor has been provided with a letter indicating that all activities required for publication of the approach have been fulfilled.

This phase is relatively straightforward yet historically has been the most troublesome in terms of confusion and conflict because of misunderstandings about data requirements, and more importantly when the process actually starts. The Eligibility Phase is graphically displayed in Figure 309-1.

a. Initial Processing for a Public SIAP on an existing Federal NAVAID

A primary objective of this activity is to process all requests in a professional manner so as to minimize the possibility for confusion or misunderstandings concerning the status or treatment of requests by providing the earliest possible feedback to the requestor. Additionally, the review sequence has been designed to avoid or at least minimize imposing unnecessary or unproductive workloads on the originator or FAA personnel.

This activity involves reviewing the request to verify that it is for a public use procedure, to determine that the request is clear with respect to the desired type of procedure, to determine if the request clearly demonstrates a reasonable need for the procedure, and to ensure (by contact if necessary) that the airport owner, manager, or operator is aware of and supports the

request. No minimum number of potential instrument approaches is required for "reasonable need." The FPO specialist must make a professional subjective judgment, based on his/her aeronautical experience as to whether or not, publication of the procedure will be in the best interest of the public.

The initial review of each request should be completed within 15 working days from the date of receipt. The originator of the request should be notified by letter within 5 working days when the initial review leads to a conclusion that the requested procedure will not be beneficial to the public and therefore is not eligible for processing and publication. The letter should include the reasons or rationale for the conclusion. It must make clear that no further action is planned on the submitted request.

After concluding that a request is eligible for processing, the data provided with the request should be evaluated for completeness and accuracy. The data requirements specified in the Standard Data Package for the type of approach requested must be provided and verified. If the data is adequate with respect to completeness and accuracy the SIAP request package should be completed and forwarded to AVN-100 for development.

If data corrections or additional data are required, the originator should be notified by letter (or electronic mail, if appropriate) that the request is eligible for approval and publication but further processing can not be accomplished until the additional/corrected data is supplied. A copy of the Standard Data Package annotated or highlighted to show data fields requiring correction and/or missing data that must be supplied shall be attached to the letter. The Standard Data Package and instructions for completion and submission will be provided to each FPO on a disk, CD, or internet/intranet (in generic form) to facilitate printing and use.

It is important that the attachment accurately show all additional data requirements and data corrections necessary for publishing the requested procedure. The letter should make clear that further processing of the request will not commence until the required data is submitted. Also, the request will be placed in an "inactive status" if all the information or data on which it will be supplied is not submitted within 60 days following the notification date.

b. Initial Processing of a Request for a Public SIAP on a Proposed Federal Navaid

The eligibility of approaches based on proposed federal navaids is determined during the Facilities & Equipment (F&E) or Capital Investment process (AIP Funded projects). It must be recognized that the determination was probably made several years earlier based on information available at that time. A review of the budget justification and supporting documentation should be completed to verify the validity of the determinations using

current data as appropriate. The appropriate divisions should be consulted immediately if the review indicates a need for change in priority or scheduling.

After concluding that the project is still eligible for processing, the data provided should be evaluated for completeness and accuracy. The data requirements specified in the Standard Data Package for the type of approach requested must be provided and verified. If the data is adequate with respect to completeness and accuracy, a milestone schedule based on the anticipated completion date for SIAP activities applicable to the project should be prepared and forwarded to all involved organizations. (Flow charts, Project Management Schedules, Publication Dates, etc)

If data corrections or additional data are required, the Airways Facilities Division should be notified by letter that further processing can not be accomplished until the additional/corrected data are supplied. A copy of the Standard Data Package annotated or highlighted to show data fields requiring correction and/or missing data that must be supplied shall be attached to the letter.

It is important that the attachment accurately show all additional data requirements and data corrections necessary for publishing the requested procedure. The letter should make clear that further processing of the request cannot commence or resume until the required data is submitted.

c. Initial Processing of a Request for a Public SIAP on an Existing or Proposed Non-Federal Navaid

A primary objective of this activity is to process all requests in a professional manner so as to minimize the possibility for confusion or misunderstandings concerning the status or treatment of requests by providing the earliest possible feedback to the requestor. Additionally, the review sequence has been designed to avoid or at least minimize imposing unnecessary or unproductive workloads on the originator or FAA personnel.

This activity involves reviewing the request to verify that it is for a public use procedure, to determine that the request is clear with respect to the desired type of procedure, and to determine if the request clearly demonstrates a reasonable need for the procedure. No minimum number of potential instrument approaches is required for "reasonable need." The specialist must make a professional subjective judgment, based on his/her aeronautical experience as to whether or not, publication of the procedure will be in the best interest of the public.

It is also necessary to coordinate the request with the regional Non-Fed Program coordinator to ensure that the owner agrees with the proposal to base the requested public procedure on that particular facility and to determine if reimbursable agreements are required. If the Non-Fed program coordinator or owner object

to the request, and these objections cannot be resolved, it must be judged to be ineligible.

The initial review of each request should be completed within 15 working days from the date of receipt. The originator of the request shall be notified by letter within 5 working days when the initial review leads to a conclusion that the requested procedure will not be beneficial to the public and therefore is not eligible for processing and publication. The letter should include the reasons or rationale for the conclusion. It must make clear that no further action is planned on the submitted request.

After concluding that a request is eligible for processing, the data provided with the request should be evaluated for completeness and accuracy. If the data is adequate with respect to completeness and accuracy the SIAP request package should be completed and forwarded to AVN-100 for development and the proponent notified that his/her request has been forwarded for development and publication.

If data corrections or additional data are required, the originator should be notified by letter (or electronic means, if available) that the request is eligible for approval and publication but further processing can not be accomplished until the additional/corrected data is supplied. A copy of the Standard Data Package annotated or highlighted to show data fields requiring correction and/or missing data that must be supplied shall be attached to the letter.

It is important that the attachment accurately show all additional data requirements and data corrections necessary for publishing the requested procedure. The letter should make clear that further processing of the request will not commence until the required data is submitted. Also, that the request will be placed in an "inactive status" if all the information or data on which it will be supplied is not submitted within 60 days following the notification date.

322. APPROVAL PHASE

The objective of this phase is to establish a consolidated regional position to publish or not publish a requested procedure that has been determined to be eligible for publication as a Public SIAP. The Approval Phase follows the Eligibility Phase and can involve all of a region's operating divisions. The Approval Phase starts with the initiation of a procedure feasibility study. The process can terminate anytime during the approval phase with a determination to disapprove, or it can continue and end with the transmittal of a complete package to AVN for development of the procedure. The Flight Procedures Office is responsible for accomplishing or overseeing the accomplishment of the following activities:

- (1) Conducting a Feasibility Study of the requested SIAP.
- (2) Conversion of the Airport and or Runway from VFR to IFR.

- (3) Determining Required Airspace Actions.
- (4) Determining Weather Reporting Requirements and Capabilities.
- (5) Determining Telephone availability.
- (6) Determining Communications Requirements.
- (7) Determining the Status of Airport Layout Plans.
- (8) Coordinating the Request and results of the Feasibility Study with the Air Traffic Division for comment.
- (9) Documenting and Evaluating comments and requirements received from the Air Traffic Division.
- (10) Coordinating the Request and results of the Feasibility Study with the Airports Division for comment.
- (11) Documenting and evaluating comments and requirements received from the Airports Division.
- (12) Coordinating the request and results of the Feasibility Study with the Airways Facilities Division for comment.
- (13) Documenting and evaluating comments and requirements received from the Airways Facilities Division.
- (14) Informing the originator/requestor when findings resulting from the coordination with the Air Traffic, Airports, and Airway Facilities Divisions will either delay or prevent publication of the requested procedure.
- (15) Performing the required Environmental Reviews.
- (16) Identifying and documenting Categorical Exclusions (CE).
- (17) Performing required Environmental Assessments (EA) if necessary.
- (18) Documenting a Finding Of No Significant Impact (FONSI) if necessary.
- (19) Preparation of required Environmental Impact Statements (EIS) if necessary.
- (20) Completion of required Reimbursable Agreements if necessary
- (21) Assembly /Verification of Procedures Development Package and Transmittal to AVN.
- (22) The normal sequencing of these activities are graphically presented in Figure 309-2.

a. Approval of a Request for a Public SIAP on an Existing Federal NAVAID

The feasibility study is the keystone of the approval phase. A properly conducted feasibility study will identify most if not all of the problems that must be dealt with to approve and publish the requested procedure. It is important that all involved personnel keep in mind the request has been found to be eligible - meaning that a determination has been made that publication of the request will be in the best interest of the public. Problems or difficulties should not prevent approval unless it is impossible to develop and implement cost-effective solutions that do not involve compromises of safety.

Effective coordination with all divisions involved in the SIAP program is essential for efficient execution of the approval process. This quality of coordination requires that the FPO prepare and provide a review package that is complete, clear, identifies all issues or problems, provides recommended solutions, confirms reasonable need, estimates benefits to the

public, and includes a planned milestone schedule. Complete or effective coordination will facilitate completion of the formulation/publication phase and improve the efficiency of the entire process.

b. Feasibility Study

A feasibility study should start with an estimate based on applicable TERPS criteria of the optimum final approach course and the best (lowest) Minimum Descent Altitude (MDA). It should include an examination of the airport data or when necessary, an on-site evaluation to determine if the airport landing surfaces are adequate to accommodate the category of aircraft that can be reasonably expected to use the procedure. The availability and condition of all visual aids necessary to support the requested procedure must be determined and all required corrective actions must be documented and submitted to the requestor or sponsor and the airport management. Actions necessary to change the airport or runway status from VFR to IFR must be identified and documented to facilitate initiation and completion. Required Airspace actions must be identified and documented to facilitate initiation and completion. Weather reporting, and Communications (including telephone) requirements and capabilities must be determined and documented. Requirements for marking and lighting must be determined and documented.

The information obtained during the eligibility phase and conduct of the feasibility study should then be compiled into a review package that is complete, clear, identifies all issues or problems, provides recommended solutions, confirms reasonable need, estimates benefits to the public, and includes a planned completion schedule.

c. Coordination

Coordination with the Air Traffic Division, Airports Division, and Airways Facilities Division, and other organizations as necessary, should be accomplished simultaneously to the extent possible. A copy of the review package should be submitted to each organization. A transmittal sheet should be attached to inform each organization of specific information needed from them, the date that their comments and/or determinations should be returned, and the name of the FPO specialist to contact should additional information or clarifications be necessary. Electronic mail maybe be used in lieu of the transmittal sheet if found appropriate.

Coordination with the Air Traffic Division should, as a minimum, provide the following information. Additionally, when Airspace action is required, the transmittal slip should request Air Traffic to initiate the necessary actions as soon as possible to support meeting the planned milestone schedule. Identification of potential conflicts with Airspace utilization.

Suggestions for specific design considerations such as feeders, initial approach and the missed approach.

Air Traffic Control communications available or needed for the requested SIAP.

Identification of formal Obstruction Evaluations related to this airport.

Coordination with the Airports Division should, as a minimum, provide the following information. Additionally, the transmittal slip should request the Airports Division to initiate any actions required by them as soon as possible to support meeting the planned milestone schedule.

Confirmation of airport/runway type - IFR or VFR.

Determine or confirm the FAR parts the airport complies with, and current certifications.

Determine if any Airport Improvement Program (AIP) projects are in progress or are planned for this airport.

Coordination with the Airways Facilities Division should, as a minimum, provide the following information. Additionally, the transmittal slip should request the Airways facilities Division to initiate any actions required by them as soon as possible to support meeting the planned publication schedule. In addition, confirmation that the requested procedure does not conflict with existing or planned projects that might impact facility availability or performance.

d. Environmental Reviews

All environmental issues and processes are described in Chapter 10 of this Handbook.

e. Preparation of the Flight Procedures Development Package and Transmission to AVN.

The Flight Procedure Development Package reflects the quality of the work accomplished by the FPO. It will influence the working relationships between the FPO and other organizations involved in the process, and can have a significant impact on the efficient and effective completion of the Formulation Phase. The Flight Procedure Development Package should represent a specification, which includes all supporting, and pertinent information necessary for a complete and clear understanding of all requirements and the rationale for any critical or special requirements. It shall as a minimum, include the milestone schedule, the tracking record through the eligibility and approval phases, and the results of all activities conducted during the eligibility and approval phases of the process. Special care must be taken to ensure that all data is correct and complete and that required supporting documentation such as the feasibility study, standard data package, and ALP have been provided, or are included.

Two identical packages are required. One is to be retained in the FPO permanent records for use as necessary. The second package is to be transmitted to the appropriate AVN organization for use in developing, processing, and maintaining the flight procedure.

f. Approval of a Request for a Public SIAP on a Proposed Federal NAVAID

The approval and formulation phases for a SIAP on a Proposed Federal NAVAID should not be initiated until the budget review process is completed and a Project Authorization (PA) has been issued. The milestone plan for development of instrument procedures based on the use of the proposed NAVAID should be designed so as to support the commissioning schedule. The FPB should maintain close coordination with the Airways Facilities Division in order to determine and make necessary adjustments to the milestone plan for the procedures development. All organizations involved in the processing of the procedure should be provided copies of all revised milestone plans

The feasibility study is the keystone of the approval phase. A properly conducted feasibility study will identify most if not all of the problems that must be dealt with to approve and publish the requested procedure.

Effective coordination with all involved divisions is essential for efficient execution of the approval process. This quality of coordination requires that the FPO prepare and provide a flight procedures review package that is complete, clear, identifies all issues or problems, provides recommended solutions, confirms reasonable need, and includes a planned milestone schedule.

g. Feasibility Study

A feasibility study should start with an estimate based on applicable TERPS criteria of the optimum final approach course and the best (lowest) Minimum Descent Altitude (MDA). It should include an examination of the airport data or when necessary an on-site evaluation to determine if the airport landing surfaces are adequate to accommodate the category of aircraft that can be reasonably expected to use the procedure. The availability and condition of all visual aids necessary to support the requested procedure must be determined and all required corrective actions must be documented and submitted to the Airways Facility Division. Actions necessary to change the airport or runway status from VFR to IFR must be identified and documented to facilitate initiation and completion.

Required Airspace actions must be identified and documented to facilitate initiation and completion. Weather reporting, and Communications (including telephone) requirements and capabilities must be determined and documented. Requirements for marking and lighting must also be determined and documented.

The information obtained during the eligibility phase and conduct of the feasibility study should then be compiled into a review package that is complete, clear, identifies all issues or problems, provides recommended solutions, confirms reasonable need, estimates benefits to the public, and includes a planned publication schedule.

h. Coordination

Coordination with the Air Traffic Division, Airports Division, and Airways Facilities Division, and other organizations as necessary, should be accomplished simultaneously to the extent possible. A copy of the review package should be submitted to each organization. A transmittal sheet (or electronic e-mail) should be attached to inform each organization of any specific information needed from them, the date that their comments and/or determinations should be returned, and the name of the FPO specialist to contact should they need additional information or clarifications.

Coordination with the Air Traffic Division should, as a minimum, provide the following information. Additionally, when Airspace action is required, the transmittal slip should request Air Traffic to initiate the necessary actions as soon as possible to support meeting the planned publication schedule.

Identification of potential conflicts with Airspace utilization.

Suggestions for specific design considerations such as feeders, initial approach and the missed approach.

Air Traffic Control communications available or needed for the requested SIAP.

Identification of formal Obstruction Evaluations related to this airport.

Coordination with the Airports Division should, as a minimum, provide the following information. Additionally, the transmittal slip should request the Airports Division to initiate any actions required by them as soon as possible to support meeting the planned milestone schedule.

Confirmation of airport/runway type - IFR or VFR and runway design specifications (Basic, Visual, Non-precision, Precision, etc)

Determine or confirm the FAR parts the airport complies with, and current certifications.

Determine if any Airport Improvement Program (AIP) projects are in progress or are planned for this airport.

Coordination with the Airways Facilities Division should, as a minimum, provide the following information. Additionally, the

transmittal slip should request the Airways facilities Division to initiate any actions required by them as soon as possible to support meeting the planned publication schedule.

i. Environmental Reviews

Environmental reviews for this area are essentially the same as all other SIAP requests and are explained in Chapter 10 of this document.

j. Preparation of the Flight Procedures Development Package

Preparation of the Flight Procedures Development Package and Transmission to AVN is the same as all other SIAP requests.

Two identical packages are required. One is to be retained in the FPO permanent records for use as necessary. The second package is to be transmitted to the appropriate AVN-100 Branch for use in developing, processing, and maintaining the flight procedure.

k. Approval of a Request for a Public SIAP on an Existing or Proposed Non-Federal NAVAID.

The feasibility study is the keystone of the approval phase. A properly conducted feasibility study will identify most if not all of the problems that must be dealt with to approve and publish the requested procedure.

Effective coordination with all divisions involved in the SIAP program is essential for efficient execution of the approval process. This quality of coordination requires that the FPO prepare and provide a review package that is complete, clear, identifies all issues or problems, provides recommended solutions, confirms reasonable need, estimates benefits to the public, and includes a planned milestone schedule. It is imperative that communications be maintained with the regional Non-Federal Program Manager to keep abreast of project progress and/or impacts on FPO activities. Additionally all correspondence with the sponsor will be coordinated with the Non-Federal Program Manager and he/she will be informed of all verbal communications with the sponsor.

1. Feasibility Study

A feasibility study should start with an estimate based on applicable TERPS criteria of the optimum final approach course and the best (lowest) Minimum Descent Altitude (MDA). It should include an examination of the airport data or when necessary an on-site evaluation to determine if the airport landing surfaces are adequate to accommodate the category of aircraft that can be reasonably expected to use the procedure. The availability and condition of all visual aids necessary to support the requested procedure must be determined and all required corrective actions must be documented and submitted to the requestor or sponsor and the airport management. Actions necessary to change the airport or runway status from VFR to IFR must be identified and documented to facilitate initiation and completion. Required

Airspace actions must be identified and documented to facilitate initiation and completion.

Weather reporting, and Communications (including telephone) requirements and capabilities must be determined and documented. Requirements for marking and lighting must be determined and documented.

The information obtained during the eligibility phase and conduct of the feasibility study should then be compiled into a review package that is complete, clear, identifies all issues or problems, provides recommended solutions, and includes a planned milestone schedule.

m. Coordination

Coordination with the Air Traffic Division, Airports Division, Flight Standards Division, and Airways Facilities Division, and other organizations as necessary, should be accomplished simultaneously to the extent possible. A copy of the review package should be submitted to each organization. A transmittal sheet should be attached to inform each organization of specific information needed from them, the date that their comments and/or determinations should be returned, and the name of the FPO specialist to contact should additional information or clarifications be necessary. Electronic mail documentation may be used when appropriate.

Coordination with the Air Traffic Division should, as a minimum, provide the following information. Additionally, when Airspace action is required, the transmittal slip should request Air Traffic to initiate the necessary actions as soon as possible to support meeting the planned milestone schedule.

Identification of potential conflicts with Airspace utilization.

Suggestions for specific design considerations such as feeders, initial approach and the missed approach.

Air Traffic Control communications available or needed for the requested SIAP.

Identification of formal Obstruction Evaluations related to this airport.

Coordination with the Airports Division should, as a minimum, provide the following information. Additionally, the transmittal slip should request the Airports Division to initiate any actions required by them as soon as possible to support meeting the planned publication schedule.

Confirmation of airport/runway type - IFR or VFR and runway design specifications (Basic, Visual, Non-precision, Precision, etc).

Determine or confirm the FAR parts the airport complies with, and current certifications.

Determine if any Airport Improvement Program (AIP) projects are in progress or are planned for this airport.

Coordination with the Airways Facilities Division should, as a minimum, provide confirmation that the requested procedure does not conflict with existing or planned projects that will impact facility availability or performance. Additionally, the transmittal slip should request the Airways Facilities Division to initiate any actions required by them as soon as possible to support meeting the planned milestone schedule.

n. Environmental Reviews

Environmental Reviews for this area are essentially the same as all other SIAP requests and are explained in Chapter 10 of this document.

o. Preparation of the Flight Procedures Development Package

Preparation of the Flight Procedures Development Package and Transmission to AVN is the same as all other SIAP requests.

p. Formulation of a Public SIAP on an Existing or Proposed Non-Federal Navaid

The activities involved in managing the processing, development, and publishing of this type of approach normally include the following:

- (1) A review by the developing organization of the Flight Procedures Development Package to ensure that all required data has been supplied, verification of the data, and an assessment of the probability of meeting the specified publication date.
- (2) Initial development based on specific guidance contained in the FPO Procedures Development Package.
- (3) An assessment of design opportunities to optimize operational benefits.
- (4) Coordination with the controlling ATC facility.
- (5) Decisions concerning needs for Extended Service Volume (ESV), and additional Airspace requirements.
- (6) Modification or refinement of the procedure as necessary to meet FPO requirements and to maximize benefits when possible.

(7) Consultation between the developing organization and the FPO to ensure the adequacy of the final procedure development or to identify and make required modifications.

(8) Arranging for required flight inspections and issuing notification of completion and results to the FPO and NFDC.

(9) Preparation of the required 8260 forms and transmittal to the FPO and NFDC.

A quality review of the approach as published by both the developing organization and the FPO followed by consultation to confirm that the approach is properly published or identify and execute necessary corrective actions.

323. - 329 RESERVED

SECTION 3 - SPECIAL INSTRUMENT APPROACH PROCEDURES

330. GENERAL

This section contains the policy, procedures and processes for establishing special instrument approaches (IAP) based on existing federal nav aids, proposed federal nav aids, existing non-federal nav aids, and proposed non-federal nav aids. A special instrument approach procedure is not for public use. It is authorized for use only by an air carrier, air taxi, or some other organized segment of the aviation industry. A special procedure is not published in the Federal Register under FAR Part 97. In the interest of clarity, this section is structured by the three major phases (eligibility, approval, and formulation) of the instrument development process and the major activities within each phase.

Processing requests for special instrument approach services often requires the use of a variety of reference materials and interaction with several organizations. A listing of the most commonly used legal references, Federal Aviation Regulations, internal directives and forms can be found in appendix 1. Guidance is also provided in Policy Memoranda that are often temporary pending publication of the policy in an appropriate directive for long-term use. Many of these are also listed in appendix 1. Each FPO should maintain a listing of current Policy Memoranda. A listing of the organizations often involved in the process is also included.

331. ELIGIBILITY PHASE

The eligibility phase is probably the most critical phase in the entire process. It starts when the regional Flight Procedures Office (FPO) receives a request for a special IAP. An air carrier, air taxi operator, or any other organized segment of the aviation industry can make the request. Air carrier and air taxi operator requests MUST be submitted to the FPO through the responsible Principal Operations Inspector (POI) and coordinated with the FSD AWOP prior to being presented to the FPO. All other requests SHALL be submitted to the FPO through the responsible Flight Standards District Office (FSDO) or the AWOP. This phase ends when the originator has been notified that the desired service is not eligible for development and provided rationale for the determination, or the originator is informed the requested service is eligible for development and provided with a letter of acknowledgement and a proposed schedule for planned completion of all activities.

Since many AWOPs and/or POIs are not as familiar with the procedures process as the FPO specialist, it is incumbent upon the FPO personnel to coordinate as closely as possible with the Flight Standards personnel to ensure quality customer service is provided by the FAA. It is the responsibility of AFS personnel to supply a complete and comprehensive package to the FPO for procedure development. This information should be shared with Flight Standards personnel as necessary. A copy of the current Memorandum of Agreement between Flight Standards Service (AFS) and Aviation System Standards (AVN) (dated and signed April 1997) is included as a reference for this section. Additional references include the "Special Procedure

Processing Flow and Responsibilities" memorandum issued by AFS-1, dated Feb 14, 1997, and the "Special IFR Helicopter GPS Point-in-Space (PinS) Approaches, dated Feb 11, 1999.

This phase is relatively straightforward yet historically has been the most troublesome in terms of confusion and conflict because of misunderstandings about data requirements, and more importantly when the procedure development process actually starts.

A graphic presentation of the Eligibility, Approval, and Formulation Phases are shown in Figures 332-1 through 332-3.

332. Initial Processing of a Request for a Special Instrument Approach Procedure

A primary objective of this activity is to process all requests in a professional manner so as to minimize the possibility for confusion or misunderstandings concerning the status or treatment of requests by providing the earliest possible feedback to the requestor. Additionally, the review sequence has been designed to avoid or at least minimize imposing unnecessary or unproductive workloads on the originator or FAA personnel. The initial review of each request should be completed within 15 working days from the date of receipt.

The study must determine the availability of an approved weather reporting, and altimeter setting source. Airport weather is required for air carrier and air taxi use of the procedure. Weather is considered to be provided if an air traffic control tower (LAWRS), Flight Service Station (FSS), weather station, ASOS or AWOPS, or SAWRS is available for use by the requestor. If weather is to be provided by a SAWRS, the FPO must have a copy of the agreement between the Weather Bureau and SAWRS operator prior to approving and disseminating the special instrument approach procedure. Should the SAWRS fail to pass a station inspection or cease to operate the Flight Standards Division (FSD) shall notify each approved air carrier/air taxi operator through the POI and ATC facility having jurisdiction over that airport that the procedure is not authorized until further notice. Should the SAWRS agreement be surrendered or cancelled, the FPO shall review the procedure to determine if cancellation is appropriate.

Communications (including telephone) requirements and capabilities must be determined and documented. Requirements for marking and lighting must be determined and documented.

An examination of the airport data or when necessary an on-site evaluation to determine if the airport/heliport landing surfaces are adequate to accommodate the category of aircraft that can be reasonably expected to use the procedure should be conducted. Actions necessary to change the airport or runway status from VFR to IFR must be identified and documented to facilitate initiation and completion. Required Airspace actions must be identified and documented to facilitate initiation and completion.

The information obtained during the eligibility phase and conduct of the feasibility study should then be compiled into a review package that is complete, clear, identifies all issues or problems, provides recommended solutions, confirms reasonable need, estimates benefits to

the public, and includes a planned development and publication schedule.

333. Coordination

Coordination with the Air Traffic Division, Airports Division, and Airways Facilities Division, and other organizations as necessary, should be accomplished simultaneously to the extent possible. A copy of the review package should be submitted to each organization. A transmittal sheet or electronic e-mail should be utilized to inform each organization of specific information needed from them, the date that their comments and/or determinations should be returned, and the name of the FPO specialist to contact should additional information or clarifications be necessary.

a. Coordination with the Air Traffic Division

Coordination with the Air Traffic Division should, as a minimum, provide the following information:

- (1) Identification of potential conflicts with Airspace utilization.
- (2) Suggestions for specific design considerations such as feeders, initial approach and the missed approach.
- (3) Air Traffic Control communications available or needed for the requested instrument approach.
- (4) Identification of formal Obstruction Evaluations related to this airport.
- (5) Comments concerning known environmental issues or sensitivities.
- (6) Special instrument approaches should be contained in controlled airspace but when Airspace action is required, the transmittal slip should request Air Traffic to initiate the necessary actions as soon as possible to support meeting the estimated publication schedule. The appropriate personnel should be requested to initiate conversion from VFR to IFR when such conversion is required.

b. Coordination with the Airports Division

Coordination with the Airports Division should, as a minimum, provide the following information:

- (1) Confirmation of airport/runway type - IFR or VFR and runway design specifications (Basic, Visual, Non-precision, Precision, etc).
- (2) Determine or confirm the FAR parts the airport/heliport complies with, all current certifications.

(3) Determine if any Airport Improvement Program (AIP) projects are in progress or are planned for this airport/heliport.

(4) Additionally, the transmittal slip should request the Airports Division to initiate any actions required by them as soon as possible to support meeting the planned publication schedule.

c. Coordination with the Airways Facilities Division

Coordination with the Airways Facilities Division should, as a minimum, provide the following information:

(1) The regional Airway Facilities Division is responsible for preparing and transmitting the facility data to NFDC and the Data Branch, AVN-210 for both Federal and Non Federal Facilities. (For new facilities or changes to existing facilities). The data should be coordinated with the FPO prior to transmission to NFDC. The FPO should ensure that a copy of the data is transmitted to AVN-210 as well as to their respective Branches.

(2) Additionally, the transmittal slip should request the Airways facilities Division to initiate any actions required by them as soon as possible to support meeting the planned publication schedule. Also confirmation that the requested procedure does not conflict with any existing or planned projects that will impact facility availability or performance.

Although the following is primarily the responsibility of Flight Standards personnel, it is included here as a reference for the FPO specialist and should be freely shared with the responsible Flight Standards personnel.

334. Review and Distribution

This paragraph describes the actions to be performed when the formulation phase has been completed. Review the completed procedure with the POI or AWOP to assure it will meet the needs of the requestor within the bounds of criteria and any waivers. Verify associated forms/documents are included and have all of the required signatures and dates. The FPO should retain a copy of all documents for their records.

The POI or AWOP will ensure the 8260-7 is properly documented and distributed. Show operator's legal name and operating name in the Air Carrier Notes section on the back of the form when necessary for clarification. If the special procedure is authorized for use by other carriers at a later date, make a copy of the original 8260-7 form, and add the newly authorized operators. A separate form for each authorized carrier should be established and retained in the file to provide an accurate history of authorizations and distributions.

Documents required for distribution are usually in the form of memorandums and letters. The number required will vary depending on

the number of operators authorized to use the special procedure and circumstances pertaining to the special procedure.

The memorandum to the FSDO or POI is an "ACTION" document. It identifies the special procedure and requests appropriate action of the FSDO or POI. The first paragraph must identify the procedure, airport, city, state, and effective date. If the attached 8260-7 is an amendment to an existing special procedure the memorandum must include the statement "The use of any previous amendment must be discontinued on the effective date of the attached 8260-7".

The memorandum is to include a paragraph advising the FSDO or POI of special notes, requirements, and/or limitations. The 8260 shall be signed and dated by both the operator and FSDO or POI. A copy of the signed forms is to be forwarded to the FPO. The FSDO or POI is to be informed that the FPO must be notified in writing if the operator ceases to require the special procedure.

The returned copy of the 8260-7 containing the FSDO/POI and air carrier signatures shall be attached to the original memorandum of request and retained in the permanent file. All subsequent amendments shall be retained in the same manner.

Information required in the memorandums and letters for other FAA offices and external organizations are for information only. While some action may be required, it is at the discretion of the receiving office or organization.

These documents are to be distributed according to the current Flight Standards policy relative to "Special Instrument Approach Procedures."

The AWOP should maintain a list of operators authorized to use each special approach. This list should include the operators name, their POI, their POIs telephone number, and the address of the FSDO having jurisdiction over the operator. The list is maintained for two reasons. (1) NFDC does not issue NOTAMs for specials. (2) Routine amendments to special instrument procedures are normally issued to the operators through their POI based on the operator's original request. Amendments that modify the operator's requirements should be brought to the attention of the operator through their POI. In some instances the operator may be required to submit a new request including supporting documentation. i.e.: aircraft performance, equipment, agreement to limit aircraft type, etc. Operators that no longer qualify shall be notified in writing through their POI of cancellation of their authority to use the special. An examples of an amendment that could result in denying use of a procedure to a particular operator would be the construction of a radio tower or other obstacle requiring the raising of an approach angle above the certified limits of one operators aircraft.

335. Cancellation

A special instrument approach shall be cancelled when it has been determined that an equivalent service can be provided with a public approach procedure, when it is no longer required, or if it has been

determined to be unsafe and an equivalent level of safety cannot be established with a procedural amendment. When a special instrument procedure is cancelled, the AWOPM or POI should notify the user that it is no longer suitable to use this procedure.

See Appendix I for "Memorandum of Agreement" between AFS and AVN

336. -339. RESERVED

SIAP DEVELOPMENT WORKFLOW DIAGRAM - ELIGIBILITY PHASE

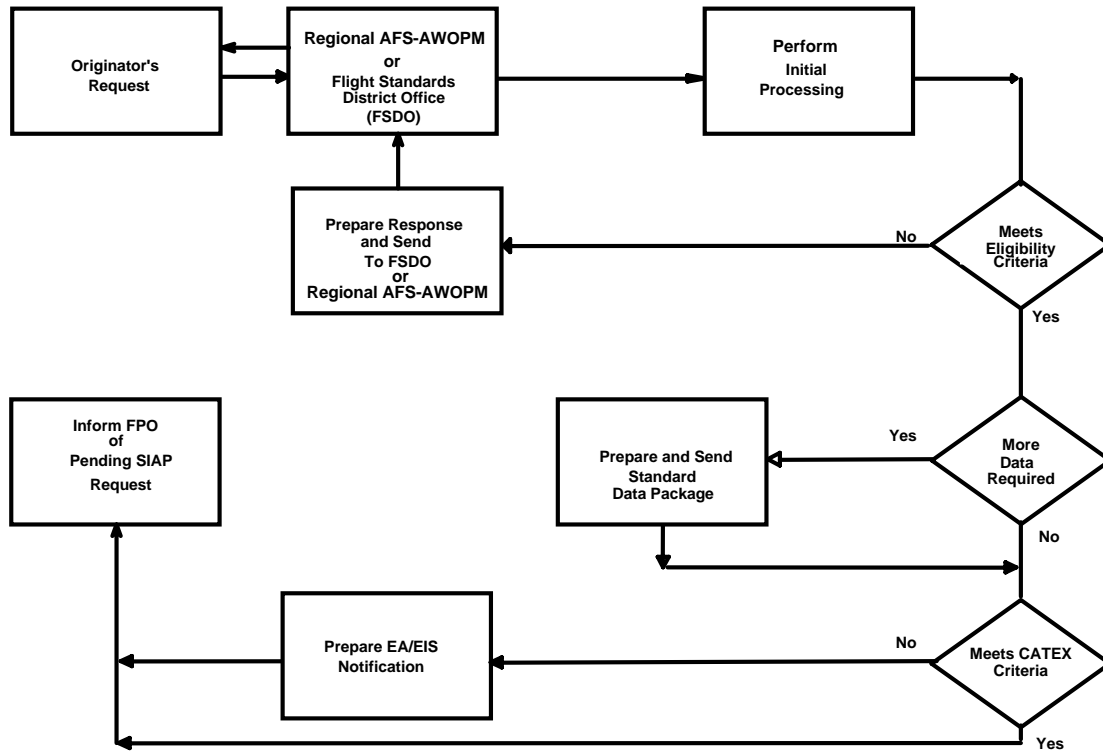


FIGURE 332-1

SIAP DEVELOPMENT WORKFLOW DIAGRAM - APPROVAL PHASE

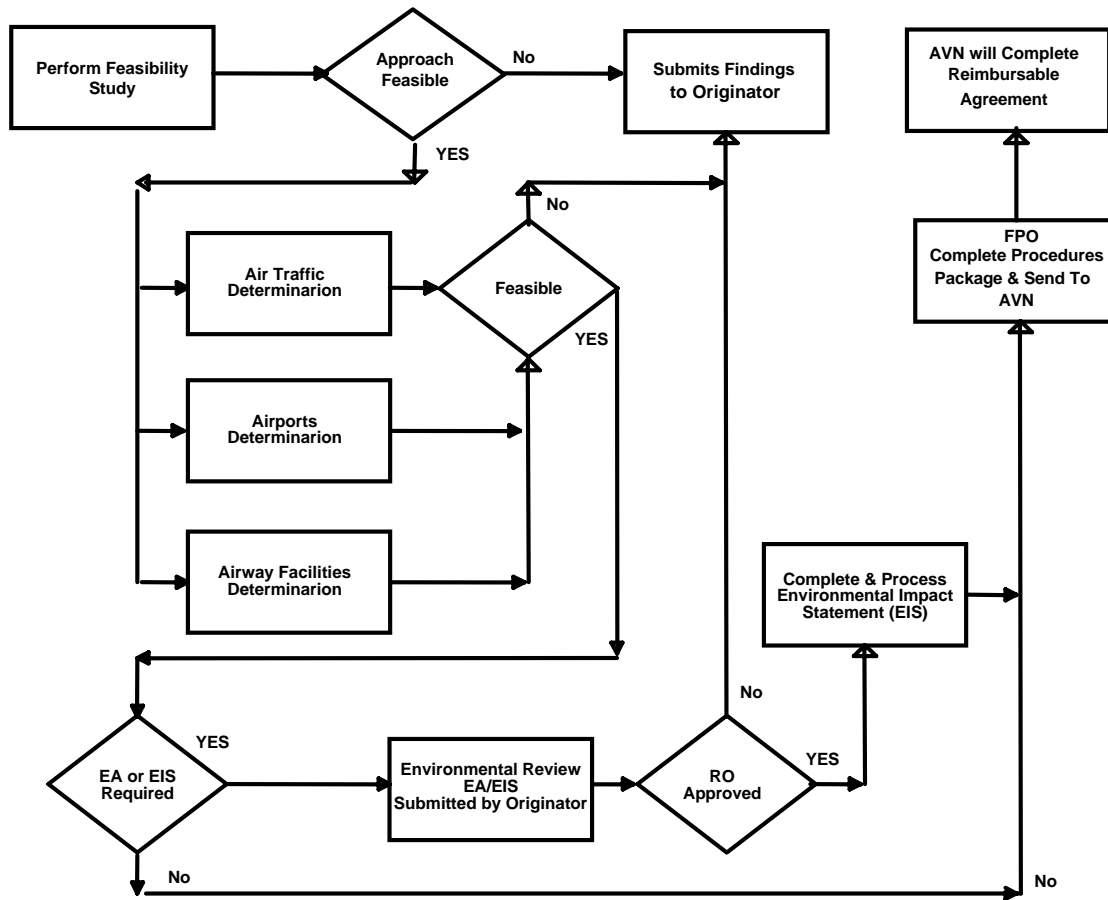


FIGURE 332-2

SIAP DEVELOPMENT WORKFLOW DIAGRAM - FORMULATION PHASE

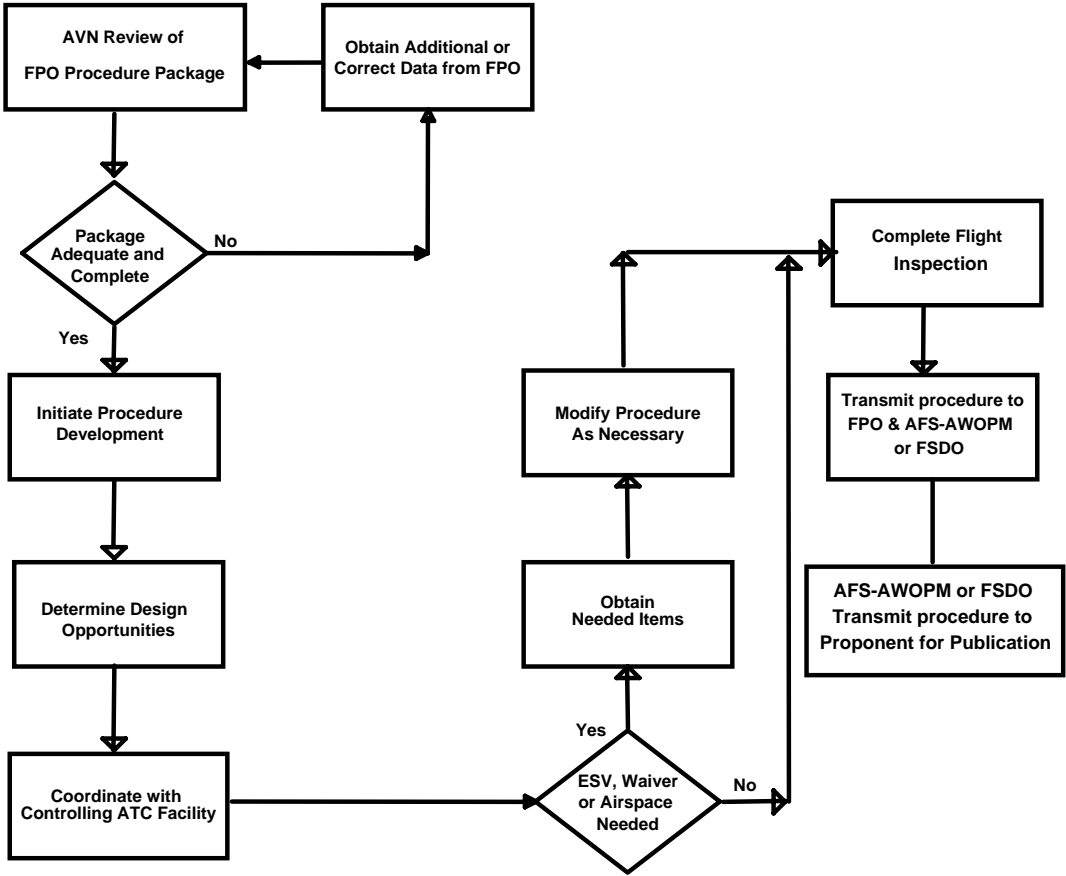


FIGURE 332-3

Section 4. FOREIGN INSTRUMENT APPROACH PROCEDURES.

340. GENERAL

This section contains the policy, procedures and processes for evaluating foreign terminal instrument procedures (FTIP) as requested by appropriate Principal Operations Inspectors (POIs) to ensure they meet acceptable criteria for use by U.S. Flag Carriers. A foreign instrument approach procedure is authorized for use by specific U.S. air carriers, and like Special Instrument Procedures is not published in the Federal Register under FAR Part 97.

Foreign governments instrument approaches and their operating minimums at foreign airports are established by the foreign authority having jurisdiction over flight operations at the airport. In general, the instrument approach procedures and operating minimums at most foreign airports are developed in accordance with the United States Standard for Terminal Instrument Procedures (TERPS), or International Civil Aviation Organization (ICAO) Procedures for Air Navigation Services - Aircraft Operations (PANS-OPS) criteria. Procedures developed by those criteria are approved for use by U.S. air carriers in accordance with FAA Order 8260.31B and are incorporated in the standard operations specification by reference.

A U.S. air carrier may need to develop or choose to develop an instrument approach procedure for use at a particular foreign airport. The standard operating specifications enable an air carrier to exercise this option provided the procedure meets either U.S. TERPS or ICAO PANS-OPS; and provided further that the air carrier submits appropriate supporting information in accordance with Order 8260.31B. These procedures may be based on either public or private NAVAID's.

In general, the Flight Procedures Office (FPO) and AVN are not directly involved with the development and/or maintenance of FTIPs. AFS has responsibility for all FTIPs which are used by U.S. air carriers. The FPO/AVN may be asked to assist Flight Standards when questions of TERPs criteria are involved. Although FPO/AVN are not generally involved in FTIPs, general guidance is provided here for informational purposes.

341. Definitions:

Controlling Region. A "controlling region " is the FAA region that is responsible for the surveillance and inspection of foreign airports, as well as instrument landing system (ILS) Category II and III approaches at those airports, that are to be used or are being used by U.S. certificate holders.

Criteria The term criteria includes U.S. TERPS, all applicable FAR, orders, advisory circulars, and/or ICAO PANS-OPS terminal instrument approach criteria.

FTIP. Means Foreign Terminal Instrument Procedures and includes instrument approach and departure procedures developed and published for use in foreign nations using either U.S. or ICAO criteria.

Certificate-Holding Office. Means the FAA district office or international field office responsible for the certificate and the operations specifications (OPS SPECS), and the regular inspection and surveillance of a U.S. certificate holder.

Certificate-Holding Region. The FAA region having supervisory responsibility for the certificate-holding office.

Certificate Holder a U.S. air carrier or operator, operating under FAR Parts 121, 125. or 135, who holds either an air carrier operating certificate or an operating certificate.

342. ELIGIBILITY PHASE

The Eligibility Phase for this activity is significantly different from that of other procedures activities and functions. The only question or issue regarding eligibility is that the request for an evaluation be from the appropriate Principal Operations Inspector (POI). The phase starts when the regional Flight Standards Division receives the request for an evaluation of a Foreign Terminal Instrument Procedure from the POI and ends when all required information has been provided.

343. REVIEW AND EVALUATION PHASE

The Evaluation Phase follows the Eligibility Phase. The primary purpose of the evaluation is to ensure that the procedure in question is appropriate for use by U.S. certificated air carriers. This is accomplished by determining if development of the procedure was based on U.S. or ICAO criteria, and if the criteria were properly applied.

344. Review and Evaluation of Procedures Developed by ICAO Member Nations

The U.S. certificate holder has a responsibility for determining that a procedure complies with criteria. Except for the approval of Category II and III approach procedures covered in Paragraph 345(E), controlling regions and certificate holding regions and offices are not required to make initial or periodic reviews of procedures developed by ICAO member nations. Such procedures will be considered as being authorized for use by U.S. certificate holders.

Should discrepancies in the application of criteria be detected by the certificate-holding office or any other source, the controlling region shall be notified as soon as possible. When the controlling region becomes aware of a possible discrepancy or safety-of-flight problem, the affected FTIP will be fully evaluated, using all available data, and a determination will be made whether to permit continued use of the FTIP by U.S. certificate-holders.

Isolated and minor deviations from criteria can often be quickly corrected by advising the nation's aviation authority or by coordinating directly with the charting agency or service used by the concerned U.S. Certificate-holder. Before making a determination that an FTIP is not authorized for use by U.S. certificate holders, the following should be considered:

- (1) Some ICAO member nations do not maintain an Aeronautical Information Publication (AIP). Instead, they update procedures as required by means of Notices to Airmen (NOTAMs) and/or a reliable and regular correspondence with the charting agencies or

service used by U.S. certificate holders. Procedures known to be published in this manner are acceptable and should be considered authorized for use by U.S. certificate holders.

(2) Some ICAO procedures may meet criteria in general, yet, contain variances in certain significant parts, such as the obstacle clearance altitude (OCA), obstacle clearance height (OCH), visibility minimums, minimum descent altitude (MDA), decision height (DH), or missed approach. In these cases, the controlling region may apply a restriction or special provision, which either results in compliance with criteria or in an equivalent level of safety.

(3) If the controlling region determines that ICAO member nation's procedures are not authorized for use by U.S. certificate holders, notification shall be made in accordance with Paragraph 346.

(4) Proposed significant modifications of FTIP shall be coordinated with the host nation and should receive concurrence of the host nation prior to use. However, emergency safety-of-flight restrictions shall not be delayed pending coordination with the host nation.

Order 8260.31B, Appendix 1 lists ICAO Member Nations whose FTIP are not authorized for use by U.S. certificate holders and those that are authorized for use by U.S. certificate holders with restrictions or limitations.

a. Review and Evaluation of Procedures Developed by Non-ICAO Member Nations

Non-ICAO FTIP that are authorized for use by U.S. certificate holders are listed in Order 8260.31B, Appendix 2 and applicable restrictions are included. The controlling region should list the FTIP of Non-ICAO member nation's known to meet the criteria requirements. A U.S. certificate holder, may through its principal operations inspector, request the FAA to evaluate a non-ICAO member nations FTIP. If the controlling region determines that a non-ICAO member nation's procedure complies with criteria or can be adjusted or restricted to provide an equivalent level of safety, notification will be given and the procedure will be listed in Order 8260.31B, Appendix 2. Modifications of the FTIP require the concurrence of the host nation.

If sufficient data are not available to conduct a satisfactory evaluation, the AWOP shall recommend to the Regional Flight Standards Division that the procedure shall not authorize for use.

b. Review and Evaluation of Procedures Developed by U.S. Certificate Holders

When a controlling region does not authorize a Non ICAO member FTIP, the certificate holder may develop a terminal instrument

procedure and submit it to the FAA for review in accordance with the OPS SPECS. In such cases, the following requirements must be satisfied:

(1) The development of new procedures or modification of existing procedures will be accomplished in compliance with U.S. TERPS or ICAO criteria. These criteria shall not be mixed, except that U.S. TERPS shall be used to determine visibility minimums in all cases.

(2) Host nation authorization to use the new or modified procedure will be obtained by the certificate holder.

(3) The certificate holder will certify, in writing, to the certificate-holding office that the procedures meet criteria and state which criteria were used, and that the host nation has approved use of the procedure. The certificate holder will forward the following supporting documentation, along with the above, to the certificate-holding office.

(a) A copy of the developed or modified procedure charts.

(b) A topographic or other reliable chart that depicts or defines the controlling obstacles within each segment of the procedure.

(c) For precision approaches, a profile view of the final approach area that depicts the obstacles between the decision height point and the runway threshold.

(4) The certificate holder may use the submitted procedures pending review by the controlling region. Following the review, the controlling region retains the authority to deny or restrict the use of the procedure.

(5) The certificate holding office will forward the submitted procedures and data, along with a copy of the certificate-holder's written certifications, to the Flight Standards Division in the controlling region.

(6) The controlling region will review the procedures to verify compliance with the criteria that were used to develop the procedures. Because the certificate-holder will have certified that the procedures comply with criteria, the review may be predicated on only the data submitted and will be concerned with confirmation of minimum altitudes and visibility minimums in relation to controlling obstructions depicted or listed in the data. When available and appropriate, other reliable source data may be used in the review, including the results of any on-site inspections that might have been conducted.

(7) The POI will be advised of the review results. If more data are required to adequately review the procedures, the

AWOP of the controlling region shall notify the POI directly, specifying what is required.

(8) If the review results in a determination that a significant deviation from criteria exists, the AWOP of the controlling region shall notify the POI directly and by the most expedient means and shall provide the changes and/or restrictions necessary to comply with criteria or provide an equivalent level of safety. If there are differences that cannot be resolved with the certificate-holder, the POI shall either place the restriction or change in the certificate-holders OPS SPECS or deny use of the procedures.

(9) The FAA review establishes only that criteria have been properly applied to the data submitted and that the certificate-holder has an adequate system of data collection and procedure development. Acceptance of the certificate-holder's developed procedures does not constitute FAA approval or responsibility for the procedures. The controlling region's Flight Standards representative, normally the AWOP, will not indicate approval of the procedures on any of the forms or charts provided by the certificate-holder. The certificate-holder retains the responsibility to keep the procedures current and in accordance with the criteria. The POI shall require the certificate-holder to notify the FAA whenever the procedure changes or whenever the certificate-holder no longer intends to use the procedures.

(10) When a review has been completed, the controlling region shall return the procedures to the POI and inform AFS-200, by message, to include the procedures in the list in Appendix 4 to Order 8260.31B.

(11) An FTIP developed by a certificate-holder is for the exclusive use of that certificate-holder and shall not be redistributed by the FAA to any other operator. This does not preclude the sharing of procedures between certificate-holders. Whether or not a procedure is shared, all certificate-holders using the same procedure shall be required to submit the procedures for review and shall be individually responsible for notifying the FAA whenever the procedure changes or whenever the certificate-holder no longer intends to use the procedures. In such cases each certificate-holder and the procedures shall be listed in Order 8260.31B, Appendix 4.

345. Review and Evaluation of Landing Minimums

Part C of the OPS SPECS specifies the lowest landing minimums that can be authorized. Controlling regions may require higher landing minimums when deviations from criteria are detected. In such cases, the controlling region will provide notification in accordance with paragraph 346. In addition, the following apply:

(1) When a host nation's approach procedure does not contain landing minimums, the published OCA/OCH shall become the DH/MDA. An MDA is rounded up to the next 20-foot increment. Visibility shall be determined using U.S. criteria (TERPS). The resultant minimums shall not be lower than those authorized in the OPS SPECS. The responsibility to ensure compliance with U.S. visibility criteria remains with the certificate-holder. This does not preclude the use of a charting service to calculate and publish visibility values for the certificate-holder.

(2) When an approach procedure contains visibility values published by the host nation, a U.S. certificate holder may use those visibility values provided:

(a) The visibility values are not lower than authorized in OPS SPECS.

(b) The descent gradient in the final approach segment does not exceed the maximum allowed by criteria.

(3) Landing minimum values (MDA and visibility) shall be expressed in the same terminology (meters, feet, nautical miles, etc.) used by the host country when broadcasting the weather to pilots.

346. Review and Evaluation of Foreign Category II and III Approach Procedures

When requested by a U.S. certificate-holder through the appropriate POI, the controlling region will determine which foreign Category II and III approach procedures are authorized for use by U.S. certificate-holders. Advisory Circular 120-29, Criteria for Approving Category I and Category II Landing Minima for FAR 121 Operators. This AC is applicable to all operators holding operating certificates issued under FAR 121, 125, 129, and 135 if operations are conducted using aircraft with a seating capacity of 10 or more, and is governing when the host country has used U.S. criteria to develop the Category II procedure. When the procedure was developed using ICAO criteria, only the portion of AC-120-29 which controls visibility and the lowest authorized DH will be used. Obstacle clearance, including obstacle penetration of the approach light plane, will be treated in accordance with ICAO criteria.

Category III approvals will be in accordance with AC 120-28C, Criteria for approval of Category III Landing Weather Minima, and Order 8400.8, Procedures for approval of facilities for FAR Part 121 and Part 135 CAT III Operations.

The following shall apply when processing a certificate-holder's request for ILS Category II and III approach authorization at Foreign airports:

(1) The POI will forward the request to the controlling region, with a copy to AFS-200.

(2) The controlling region will provide an evaluation of Foreign Category II and III operations through available host nation data, as well as an on-site inspection to ensure that the ILS is equivalent to U.S. standards and to determine the lowest landing minimums that can be authorized. The factors for determining the degree of equivalence for Category II and III are listed in paragraph 345(F).

(3) If Category II or III operations are authorized, the controlling region will send a message to all regions and AFS-200 that includes the effective date, the lowest Category II landing minimums that can be authorized and, if appropriate, authorization for Category III operations and applicable minima.

(4) AFS-200 will list the Category II and III authorizations in the Category II/III semi-annual status report.

(5) Once Category II and III operations are authorized, the controlling region will continue to provide for monitoring of the host nation data and, when appropriate, will send a message to all regions and AFS-200 whenever the landing minimums change or there is a significant change to the status of the procedure that has not already been advertised by a host nation international NOTAM.

347. Category II and III Approach Degree of Equivalency

The following factors should be evaluated to determine if the degree of equivalence is sufficient to permit approval for use by U.S. operators:

a. Category II:

- (1) High-intensity approach lights.
- (2) High-intensity runway edge lights.
- (3) Touchdown zone and centerline lights.
- (4) Quality and integrity of approach and landing ground based guidance systems.
- (5) RVR reporting capabilities and procedures.
- (6) ILS/MLS critical area protection.
- (7) Obstacle clearance protection in the approach missed approach areas including the obstacle free zone.
- (8) Airport surface traffic control.
- (9) Terminal area traffic control.

b. Category III:

- (1) High-intensity approach lights.
- (2) High-intensity runway edge lights.
- (3) Touchdown zone and centerline lights.
- (4) Taxiway edge lights.
- (5) High intensity taxiway centerline lights.
- (6) Runway markings.
- (7) Quality and integrity of approach and landing ground based guidance systems.
- (8) RVR reporting capabilities and procedures.
- (9) ILS/MLS critical area protection.
- (10) Obstacle clearance protection in the approach missed approach areas including the obstacle free zone.
- (11) Airport surface traffic control.
- (12) Terminal area air traffic control.
- (13) Procedures for regulating the ground movement of aircraft and vehicles during CAT III operations.

348. Detecting and Handling FTIP Deviations from Criteria

The FAA presumes that FTIP developed by an ICAO member nation is in compliance with criteria and, therefore, does not require initial or periodic review, except when processing requests for Category II and III authorizations. However, the air carrier inspector who conducts periodic surveillance of foreign airports used by U.S. certificate-holders and inspectors who accompany the air crew during operations into those airports, are in a position to observe the airport's approach and departure environment. These inspectors should be a valuable source of information for the controlling region regarding safety-of-flight discrepancies. When a controlling region becomes aware of a significant safety-of-flight discrepancy, which is not already advertised in the international NOTAM system or if a significant deviation from criteria is detected, the controlling region shall assure the following actions are completed:

- (1) Evaluate the alleged discrepancy or deviation with available data and, if appropriate, arrange for the correction of the problem through the aviation authority of the host nation or through the charting service as appropriate.
- (2) If the discrepancy or deviation is not corrected, the controlling region shall determine what procedural restrictions or special provisions (if any) are necessary to comply with criteria or achieve an equivalent level of safety. In such

cases, the controlling region shall transmit a message to all regions, AFS-200, and the USAF Instrument Flight Center, Randolph AFB, Texas, 78150, Attn: Instrument Procedures Section, containing the applicable restrictions, If known, the certificate-holding offices should be included in the message address. Otherwise, the certificate-holding region shall notify the assigned certificate holders that the procedure is authorized for use only if the certificate holder complies with the restrictions. The controlling region shall include in notifying messages the specific reasons as to why the restrictions or special provisions are needed. If procedural restrictions are not practical, or if an equivalent level of safety (in accordance with criteria) cannot be obtained through restrictions or special provisions such as air crew training, the controlling region shall transmit a message to all regions, AFS-200, and the USAF Instrument Flight Center, Randolph AFB, Texas, 78150, Attn: Instrument Procedures Section, that the procedure or procedures are not authorized for use by U.S. certificate holders. In these cases, the controlling region will specifically state in the notifying message the reasons why the procedure does not meet U.S. or ICAO criteria and why an equivalent level of safety cannot be obtained through restrictions or special provisions.

(3) Controlling regions shall maintain a file of current messages that restrict or deny use of FTIP in its area of responsibility. Furthermore, regions shall take action to cancel the restrictions by another message to all addressees who received the initial message whenever the reason for the restriction has been removed or no longer applies. This will require a regular review of outstanding messages and a periodic follow-up study of affected procedures.

(4) If practical, the controlling region should advise the proper aviation authorities of the host nation whenever restrictions are applied or cancelled.

349. FTIP PROVIDED BY THE CONTROLLING REGION

The development of foreign procedures by FAA organizations is discouraged. If there are reasons why an FTIP should not be authorized using the provisions of this chapter, the FAA should not assume such a responsibility for the same reasons. However there might be special reasons why a controlling region would find it mutually beneficial to approve the FAA development and maintenance of a FTIP. In such cases, the following applies:

(1) An FAA-developed FTIP requires subsequent FAA monitoring and maintenance of the procedure to assure that the procedure is safe and current.

(2) Authorization to develop and use the procedure will be obtained from the host nation by the controlling region prior to issuing the procedure for use by U.S. certificate holders.

(3) Either U.S. or ICAO criteria will be used in the development of the procedure depending on the requirements of the host nation. U.S. criteria will be used to establish landing minimums unless the host nation requires higher minimums.

(4) The controlling region shall provide a reliable and timely method of obtaining current aeronautical information from the host nation. This should be in the form of an agreement, which includes direct telephone contact, messages, courier service, and/or special distribution of AIP data.

(5) FTIP provided by the controlling region shall be distributed to AFS-200 and to all regional Flight Standards Divisions for redistribution to U.S. certificate holders. Amendments and/or restrictions are to be distributed in the same manner. These FTIP and their amendments and/or restrictions will be listed in Order 8260.31B, Appendix 3.

(6) FTIP provided by the controlling regions are to be coordinated with the Flight Procedures Standards Branch, AFS-420, for quality control and standardization prior to distribution to user organizations.

(7) Emergency safety-of-flight restrictions or amendments shall be handled in accordance with paragraph 346.

(8) FTIP provided by the controlling region and amendments to those procedures are not mandatory upon a certificate holder who has authority to use procedures already developed for the same host nation runway unless the controlling region determines the existence of major safety-of-flight differences which cannot be resolved. In such cases, coordination with the POI is necessary to cancel the authority to use the FTIP developed the certificate holder.

The activities commonly involved in this process are illustrated Figure 343-1.

348. - 349. RESERVED

FOREIGN APPROACH EVALUATION WORKFLOW DIAGRAM

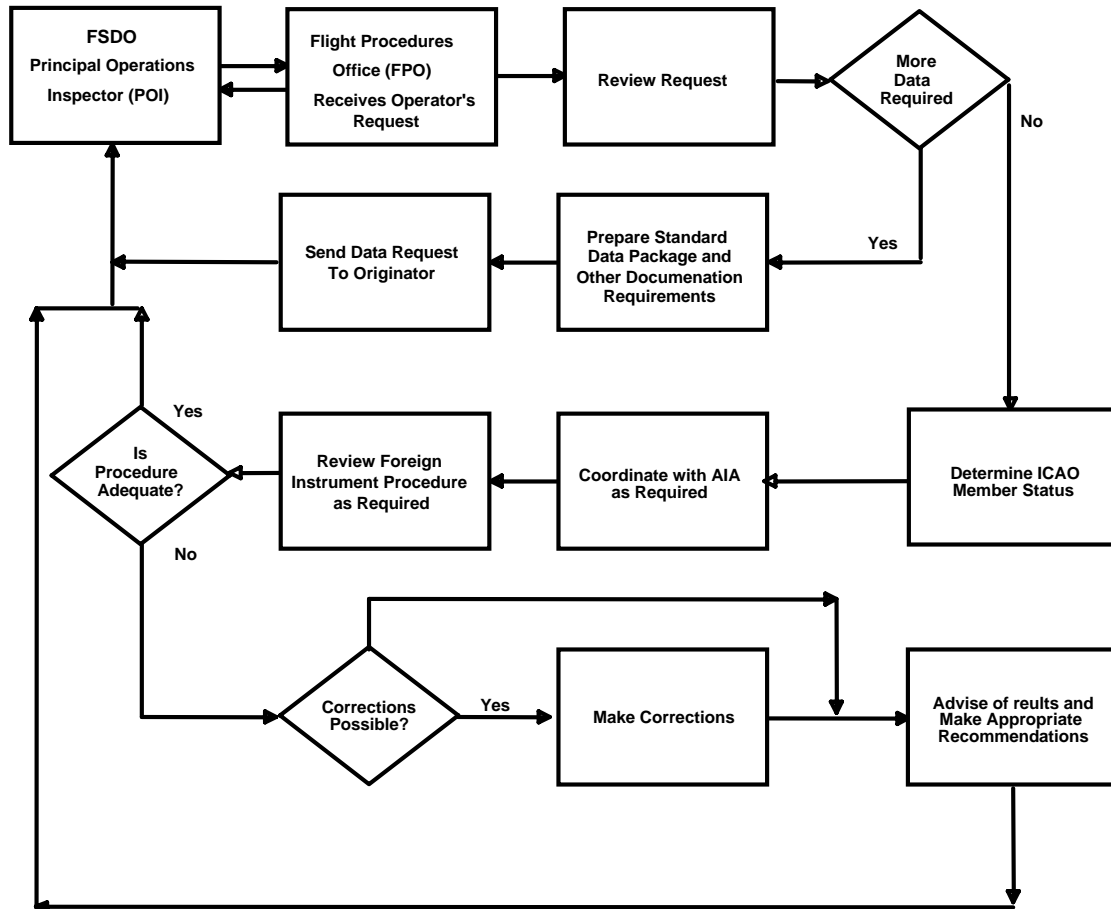


FIGURE 343-1

Section 5. - U.S. ARMY STANDARD INSTRUMENT APPROACHES

350. GENERAL

This section contains the policy, procedures and processes for establishing Standard Instrument Approach Procedures (SIAP) for the U.S. Army as provided by National Agreement 127 (NAT-127). The development, maintenance and handling policies of army and civil procedures are similar but minor deviations do exist and have been incorporated in this section. Charting of Army procedures is accomplished by the Army through the National Imagery and Mapping Agency (NIMA).

In the interest of clarity, this section is structured by the three major phases (Eligibility, Approval, and Formulation) of the SIAP establishment process and the major activities within each phase.

Definitions and Organizational Descriptions:

Army Installation. A military activity (base, camp, fort, barracks) under the jurisdiction of the Army, Army National Guard, or Army Reserve, and including an airfield, heliport, strip, or other landing area.

USAASA. U.S. Army Aeronautical Services Agency. This office, located in the Washington, D.C. area, has the primary Army responsibility concerning terminal procedures and provides appropriate instructions to Department of Army Regional Representatives (DARR).

USAASDE. U.S. Army Aeronautical Services Detachment, Europe. This office is located at Heidelberg Army Airfield, Germany, and carries out the USAASA responsibility for terminal instrument procedures in the Europe, North Africa, and Middle East (ENAME) area. The commander, USAASDE, also serves as an area DARR.

DARR. Department of Army Regional Representative to the FAA.

NIMA. National Imagery and Mapping Agency, The DOD aeronautical charting agency located in St. Louis Missouri, and having primary responsibility for military cartographic matters.

NIMAOE/NIMAOP. National Imagery and Mapping Agency Office Europe/National Imagery and Mapping Agency Office Pacific. Provides aeronautical chart and Aeronautical Information Publication (AIP) library support to appropriate theaters.

Flight Procedures Office (FPO). The FAA office in the region responsible for the management of all aspects of instrument flight procedures within the region's geographic area of responsibility. The FPO specifically approves/disapproves requests for instrument procedures, prepares the development package to specify how a procedure is to be developed, and performs the final quality control review of the procedures developed by AVN.

Office of Aviation System Standards (AVN). The FAA office responsible for standardized application of criteria for instrument flight procedures and validation of required data.

National Flight Data Center (NFDC). The FAA headquarters office responsible for validation of data depicted on aeronautical charts and for compilation of procedures proposed for inclusion in Federal Aviation Regulation (FAR) Part 97.

National Ocean Service (NOS). The Federal agency responsible for the charting of FAA FAR Part 97 civil instrument procedures.

Joint Use Location. Those locations where the airport is under civil control and both civil and military operations are conducted.

351. ELIGIBILITY PHASE

The Eligibility Phase is probably the most critical phase in the entire process. It starts when the FPO receives a request for a IAP from the USAASA. The phase ends when the FPO has concluded that all required data has been supplied by the requestor, that all data has been verified to be correct, and the requestor has been provided with a milestone schedule for planned completion of all activities required for publication of the approach.

This phase is relatively straightforward yet historically has been the most troublesome in terms of confusion and conflict because of misunderstandings about data requirements, and more importantly when the process actually starts. This chapter includes a graphic presentation of the Eligibility Phase in Figure 351-1.

a. Initial Processing of a Request for a U.S. Army SIAP

A primary objective of this activity is to process all requests in a professional manner so as to minimize the possibility for confusion or misunderstandings concerning the status or treatment of requests by providing the earliest possible feedback to the requestor. Additionally, the review sequence has been designed to avoid or at least minimize imposing unnecessary or unproductive workloads on the originator or FAA personnel.

This activity involves reviewing the request to determine that the request is clear with respect to the desired type of procedure and that all data required to develop the requested approach has been provided and is correct.

The data provided with the request should be evaluated for completeness and accuracy. The data requirements specified in the Standard Data Package for the type of approach requested must be provided and verified. If the data is adequate with respect to completeness and accuracy, acknowledgement letter based on the anticipated completion date for activities applicable to the specific request should be prepared and forwarded to the originator as soon as possible but not more than 20 days after receipt of the request.

If data corrections or additional data are required, the originator should be notified by letter that further processing can not be accomplished until the additional/corrected data is supplied. A copy of the Standard Data Package annotated or highlighted to show data fields requiring correction and/or missing data that must be supplied shall be attached to the letter. It is important that the attachment accurately show all additional data requirements and data corrections necessary for publishing the requested procedure. The letter should make clear that further processing of the request will not commence until the required data is submitted and that the request will be placed in an "inactive status" if all the information or data on which it will be supplied is not submitted within 60 days following the notification date.

352. APPROVAL PHASE

The objective of this phase is to establish a consolidated regional position to publish or not publish a requested procedure. The Approval Phase follows the Eligibility Phase and can involve all of a region's operating divisions. The Approval Phase starts with the initiation of a procedure feasibility study. The process can terminate anytime during the approval phase with a determination to disapprove, or it can continue and end with the transmittal of a complete package to AVN for development of the procedure. The Flight Procedures Office is responsible for accomplishing or overseeing the accomplishment of the following activities as required:

- (1) Conducting a Feasibility Study of the Requested SIAP
- (2) Determining Required Airspace Actions.
- (3) Determining Weather Reporting Requirements and Capabilities.
- (4) Determining Telephone availability.
- (5) Determining Communications Requirements.
- (6) Determining the Status of Airport Layout Plans.
- (7) Coordinating the Request and results of the Feasibility Study with the Air Traffic Division for comment.
- (8) Documenting and Evaluating Comments and Requirements Received from the Air Traffic Division..
- (9) Informing the originator/requestor when findings resulting from the coordination will either delay or prevent publication of the requested procedure.
- (10) Assuring that the Army has satisfied all environmental requirements, and has so documented.
- (11) Assembly /Verification of Procedures Development Package and Transmittal to AVN.

a. Approval of a Request for a U.S. Army SIAP

The feasibility study is the keystone of the approval phase. A properly conducted feasibility study will identify most if not all of the problems that must be dealt with to approve and publish the requested procedure.

Effective coordination with all divisions involved in the SIAP program is essential for efficient execution of the approval process. This quality of coordination requires that the FPO prepare and provide a review package that is complete, clear, identifies all issues or problems, provides recommended solutions as necessary. Complete or effective coordination will facilitate completion of the formulation/publication phase and improve the efficiency of the entire process.

1. Feasibility Study

A feasibility study should start with an estimate based on applicable TERPS criteria of the optimum final approach course and the best (lowest) Minimum Descent Altitude (MDA). It should include an examination of the airport data or when necessary an on-site evaluation to determine if the airport landing surfaces are adequate to accommodate the category of aircraft that can be reasonably expected to use the procedure. The availability and condition of all visual aids necessary to support the requested procedure must be determined and all required corrective actions must be documented and submitted to the requestor or sponsor and the airport management. Required Airspace actions must be identified and documented to facilitate initiation and completion.

Weather reporting, and Communications (including telephone) requirements and capabilities must be determined and documented. Requirements for marking and lighting must be determined and documented.

The information obtained during the eligibility phase and conduct of the feasibility study should then be compiled into a review package that is complete, clear, identifies all issues or problems, provides recommended solutions, includes a estimated publication date.

2. Coordination

A copy of the review package should be submitted to the Air Traffic Division. A transmittal sheet should be attached to inform the division of specific information needed from them, the date that their comments and/or determinations should be returned, and the name of the FPO specialist to contact should additional information or clarifications be necessary.

Coordination with the Air Traffic Division should, as a minimum, provide the following information.

Note: Additionally, when Airspace action is required, the transmittal slip should request Air Traffic to initiate the necessary actions as soon as possible to support meeting the planned milestone schedule.

(1) Identification of potential conflicts with Airspace utilization.

(2) Suggestions for specific design considerations such as feeders, initial approach and the missed approach.

(3) Air Traffic Control communications available or needed for the requested SIAP.

(4) Identification of formal Obstruction Evaluations related to this airport.

3.Environmental Reviews

The Army is responsible for assuring that all environmental requirements have been satisfied. It is sufficient for the Army to provide a simple statement to the FPO that all such requirements have been satisfactorily met.

4.Preparation

Preparation of the Fight Procedures Development Package and Transmission to AVN is the same as all other SIAP requests.

353. FORMULATION PHASE

The objective of this phase is to develop, process and publish an instrument approach procedure in accordance with the regional FPO specifications to meet user requirements. The Formulation Phase is the last phase in the process. The development work is accomplished by AVN-100. The FPO retains oversight responsibility and must monitor formulation activities as necessary to ensure effective and efficient processing of each instrument procedure

Open communications must be maintained between all organizations involved in the formulation process to ensure timely publication of the procedure. The FPO must be advised immediately of any complications having the potential to delay publication so that appropriate notifications can be effected.

a. Formulation of a U.S. Army SIAP

The activities involved in managing the processing, development, and publishing of this type of approach normally include the following:

- (1) A review by the developing organization of the Flight Procedures Development Package to ensure that all required data has been supplied, verification of the data, and an assessment of the probability of meeting the specified publication date.
- (2) Initial development based on specific guidance contained in the FPO Procedures Development Package.
- (3) An assessment of design opportunities to optimize operational benefits.
- (4) Coordination with the controlling ATC facility.
- (5) Decisions concerning needs for Extended Service Volume (ESV), and additional Airspace requirements.
- (6) Modification or refinement of the procedure as necessary to meet FPO requirements and to maximize benefits when possible.
- (7) Consultation between the developing organization and the FPO to ensure the adequacy of the final procedure development or to identify and make required modifications.
- (8) Arranging for required flight inspections and issuing notification of completion and results to the FPO and NFDC.
- (9) Preparation of the required 8260 forms and transmittal to the FPO and USAASA.
- (10) A quality review of the approach as published by both the developing organization and the FPO followed by consultation to confirm that the approaches properly published or identify and execute necessary corrective actions.

A graphic presentation of the Eligibility, Approval, and Formulation Phases are shown in Figures 351-1 through 351-3.

354. - 359. RESERVED

US ARMY PROCEDURES WORKFLOW DIAGRAM -ELIGIBILITY PHASE

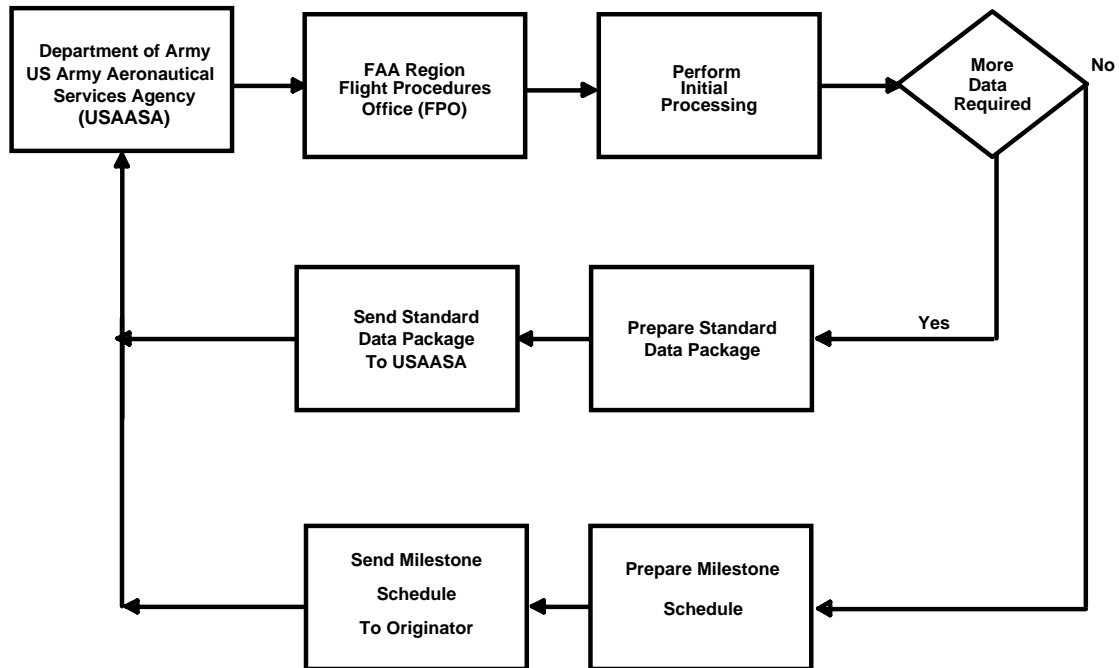


FIGURE 351-1

US ARMY PROCEDURES WORKFLOW DIAGRAM - APPROVAL PHASE

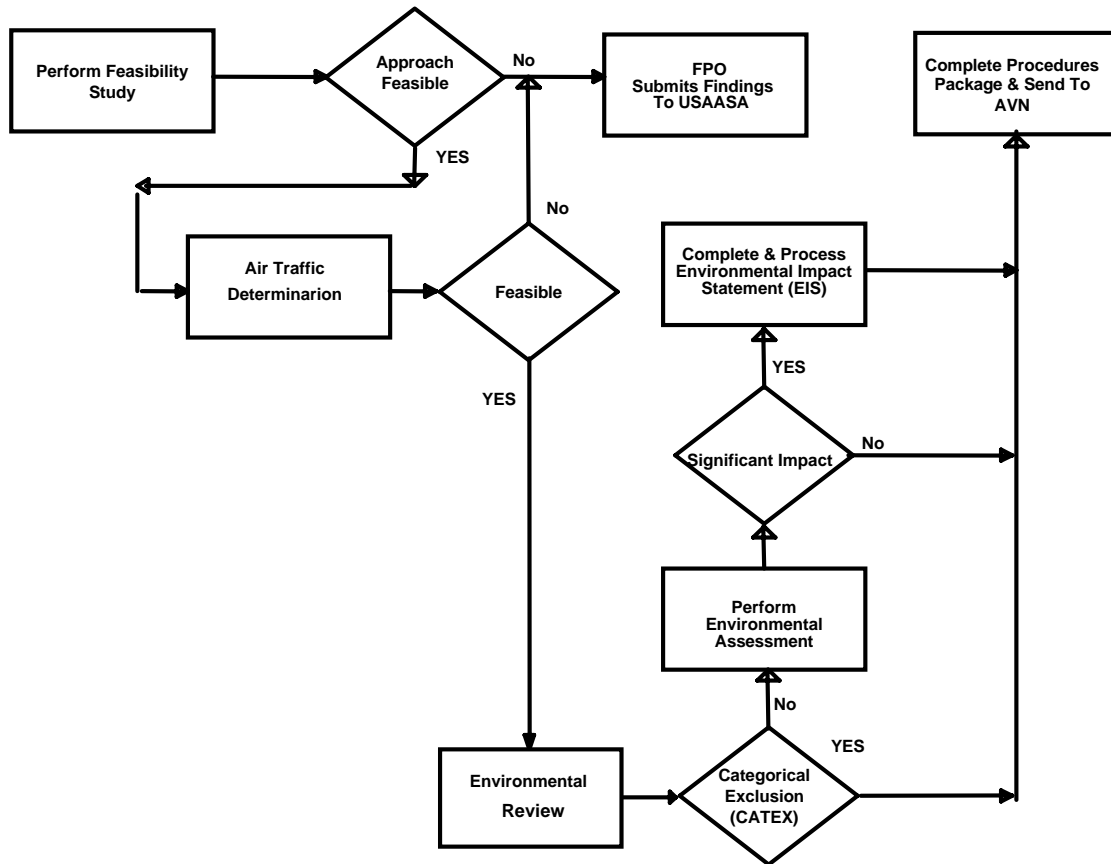


FIGURE 351-2

US ARMY PROCEDURES - FORMULATION PHASE

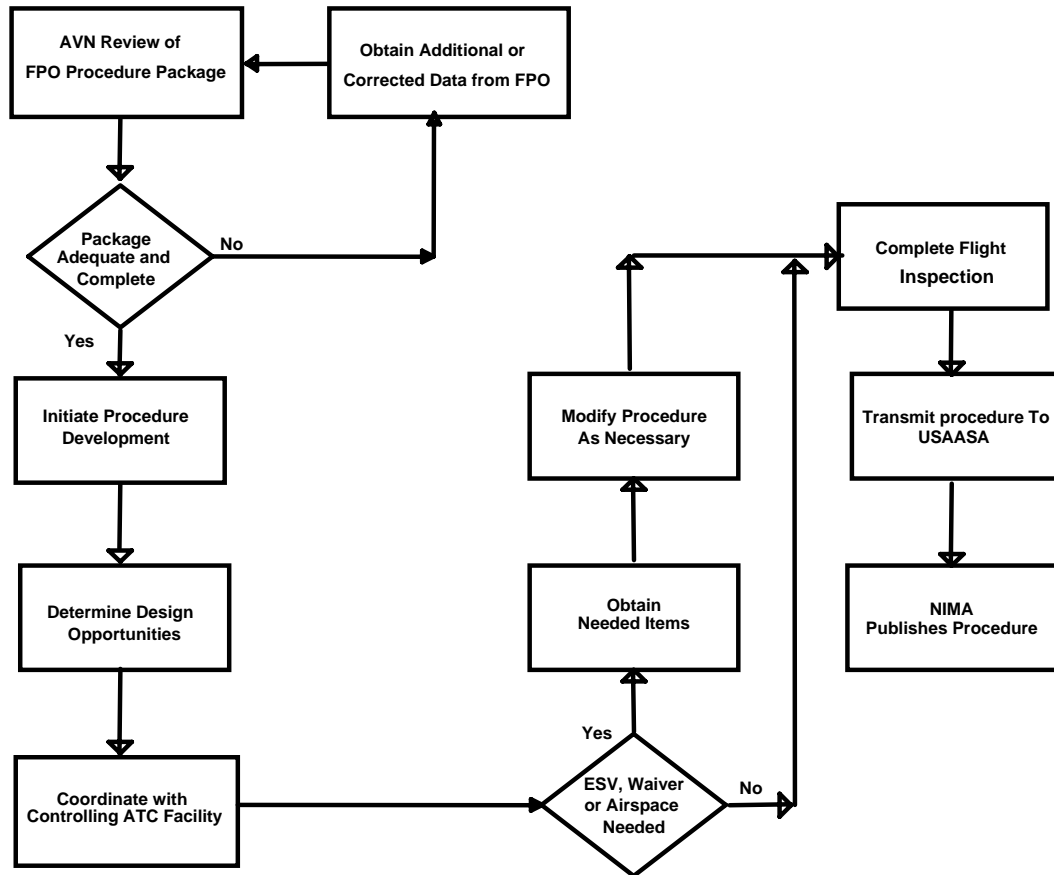


FIGURE 351-3

Section 6. U.S. AIR FORCE INSTRUMENT APPROACH PROCEDURES AT CIVIL AIRPORTS.

360. GENERAL

This section contains the policy, procedures and processes for establishing Standard Instrument Approach Procedures (SIAP) for the U.S. Air Force at civil airports to meet military requirements. These requirements may be met by modification of an existing procedures, or development of a new procedure. Military requirements must be compatible with airspace availability, navigational facilities, and air traffic requirements. Charting of U.S. Air Force procedures is accomplished by the U.S. Air Force through the National Imagery and Mapping Agency (NIMA).

In the interest of clarity, this section is structured by the three major phases (Eligibility, Approval, and Formulation) of the SIAP establishment process and the major activities within each phase.

Definitions and Organizational Descriptions:

Headquarters United States Air Force (HQ/USAF). The Airspace and Air Traffic Services Division, HQ USAF/XOORF, of the Directorate under the Deputy Chief of Staff, Plans and Operations is the HQ USAF office responsible for all program and policy matters related to terminal instrument procedures, airspace management, and air traffic control services.

United States Air Force Flight Standards Agency (AFFSA). Focal point for all USAF instrument flight matters, specifically pilot procedures, instrument procedures design criteria, and aeronautical information cockpit displays. The major command responsible for providing technical support for air traffic control services, navigation, and instrument flight procedures development throughout the Air Force. Terminal instrument procedures are a function of the TERPS Management Division of AFFSA/XO.

NIMA. National Imagery and Mapping Agency. The DOD aeronautical charting agency located in St. Louis Missouri, and having primary responsibility for military cartographic matters.

Flight Procedures Office (FPO). The FAA office in the region responsible for the management of all aspects of instrument flight procedures within the region's geographic area of responsibility. The FPO specifically approves/disapproves requests for instrument procedures, prepares the development package to specify how a procedure is to be developed, and performs a final quality control review after publication

National Flight Data Center (NFDC). The FAA headquarters office responsible for validation of data depicted on aeronautical charts and for compilation of procedures proposed for inclusion in Federal Aviation Regulation (FAR) Part 97.

National Ocean Service (NOS). The Federal agency responsible for the charting of FAA, FAR Part 97, civil instrument procedures.

Joint Use Location. Those locations where the airport is under civil control and both civil and military operations are conducted.

361. ELIGIBILITY PHASE

The Eligibility Phase is probably the most critical phase in the entire process. It starts when the Flight Procedures Office receives a request for a SIAP from the U.S. Air Force Regional Representative. The phase ends when the FPO has concluded that all required data has been supplied by the requestor, that all data has been verified to be correct, and the requestor has been provided with a acknowledgement letter and given an estimated publication date.

This phase is relatively straightforward yet historically has been the most troublesome in terms of confusion and conflict. This is primarily a result of misunderstandings about data requirements and when the process actually starts.

a. Initial Processing of a Request for a U.S. Air Force SIAP.

A primary objective of this activity is to process all requests in a professional manner so as to minimize the possibility for confusion or misunderstandings concerning the status or treatment of requests by providing the earliest possible feedback to the requestor. Additionally, the review sequence has been designed to avoid or at least minimize imposing unnecessary or unproductive workloads on the originator or FAA personnel. This activity involves:

- (1) Reviewing the request to determine the request was originated or endorsed by the U.S. Air Force Regional representative.
- (2) Ensuring the request is clear with respect to the desired type of procedure.
- (3) Ensuring the procedure is compatible with airspace availability, navigational facilities, and air traffic requirements.

b. Additional Data Requirements

The data provided with the request should be evaluated for completeness and accuracy. The data requirements specified in the Standard Data Package for the type of approach requested must be provided and verified. If the data is adequate with respect to completeness and accuracy, an acknowledgement letter based on the anticipated completion date for activities applicable to the specific request should be prepared and forwarded to the originator as soon as possible but not more than 20 days after receipt of the request. If data corrections or additional data are required, the originator should be notified, by letter, that further processing can not be accomplished until the additional/corrected data is supplied.

The letter should be accompanied with a copy of the Standard Data Package. The package should be annotated or highlighted to show data fields requiring correction and/or missing data. It is important that the attachment accurately show all additional data requirements and data corrections necessary for publishing the requested procedure. The letter should indicate clearly, that further processing of the request will not commence until the required data is submitted. Furthermore, request will be placed in an "inactive status" if all the information or date on which it will be supplied is not submitted within 60 days following the notification date.

362. APPROVAL PHASE

The objective of this phase is to establish a consolidated regional position to publish or not publish a requested procedure. The Approval Phase follows the Eligibility Phase and can involve all of a region's operating divisions and up to 21 activities. The Approval Phase starts with the initiation of a procedure feasibility study. The process can terminate anytime during the approval phase with a determination to disapprove, or it can continue and end with the transmittal of a complete package to AVN-100 for development of the procedure.

a. Standard Activities

The Flight Procedures Office is responsible for accomplishing or overseeing the accomplishment of the following activities as required:

- (1) Conducting a Feasibility Study of the Requested SIAP
- (2) Determining Required Airspace Actions.
- (3) Determining Weather Reporting Requirements and Capabilities.
- (4) Determining Telephone availability.
- (5) Determining Communications Requirements.
- (6) Determining the Status of Airport Layout Plans.
- (8) Coordinating the Request and results of the Feasibility Study with the Air Traffic Division for comment.
- (9) Documenting and Evaluating Comments and Requirements Received from the Air Traffic Division..
- (10) Informing the originator/requestor when findings resulting from the coordination will either delay or prevent publication of the requested procedure.
- (11) Performing the Required Environmental Reviews (when the procedure will be published as a civil procedure. If the

procedure will only be published in the military publications, the environmental responsibility falls to the Air Force). Some environmental considerations are:

- (a) Identifying and Documenting Categorical Exclusions (CE).

- (b) Performing Required Environmental Assessments.

- (c) Documenting a Finding Of No Significant Impact (FONSI).

- (d) Preparation of Required Environmental Impact Statements.

(12) Assembly /Verification of Procedures Development Package and transmittal to AVN.

b. Approval of a Request for a U.S. Air Force SIAP

The feasibility study is the keystone of the approval phase. A properly conducted feasibility study will identify most if not all of the problems that must be dealt with to approve and publish the requested procedure.

Effective coordination with all divisions involved in the SIAP program is essential for efficient execution of the approval process. This quality of coordination requires that the FPO prepare and provide a review package that is complete, clear, identifies all issues or problems, provides recommended solutions, and includes a planned milestone schedule. Complete or effective coordination will facilitate completion of the formulation/publication phase and improve the efficiency of the entire process.

1. Feasibility Study

A feasibility study should start with an evaluation to determine if the requested service can be provided by modification or amendment of an existing procedure. If a new procedure is required, an evaluation based on applicable TERPS criteria should be conducted to determine the optimum final approach course and the best (lowest) Minimum Descent Altitude (MDA). The study should include an examination of the airport data or when necessary an on-site evaluation to determine if the airport landing surfaces are adequate to accommodate the category of aircraft that can be reasonably expected to use the procedure. The availability and condition of all visual aids necessary to support the requested procedure must be determined and all required corrective actions must be documented and submitted to the requestor or sponsor and the airport management. Required Airspace actions must be identified and documented to facilitate initiation and completion.

Weather reporting, and Communications (including telephone) requirements and capabilities must be determined and documented. Requirements for marking and lighting must be determined and documented.

The information obtained during the eligibility phase and conduct of the feasibility study should then be compiled into a review package that is complete, clear, identifies all issues or problems, provides recommended solutions, includes a planned milestone schedule.

2. Coordination with the Air Traffic Division

A copy of the review package should be submitted to the Air Traffic Division. A transmittal sheet should be attached to inform the division of specific information needed from them, the date that their comments and/or determinations should be returned, and the name of the FPO specialist to contact should additional information or clarifications be necessary. Coordination with the Air Traffic Division should, as a minimum, provide the following information:

- (1) If Airspace action is required, the transmittal slip should request Air Traffic to initiate the necessary actions as soon as possible to support meeting the planned, or estimated, publication schedule.
- (2) Identification of potential Airspace utilization conflicts.
- (3) Suggestions for specific design considerations such as feeders, initial approach and the missed approach.
- (4) Air Traffic Control communications available or needed for the requested SIAP.
- (5) Identification of formal Obstruction Evaluations related to this airport.

3. Coordination with the Airports Division

Additionally, the transmittal slip should request the Airports Division to initiate any actions required by them as soon as possible to support meeting the planned milestone schedule. Coordination with the Airports Division should, as a minimum, provide the following information:

- (1) Confirmation of airport/runway type - IFR or VFR.

(2) Determine or confirm the FAR parts the airport complies with, and current certifications.

(3) Determine if any Airport Improvement Program (AIP) projects are in progress or are planned for this airport.

4.Coordination with the Airways Facilities Division

Additionally, the transmittal slip should request the Airways facilities Division to initiate any actions required by them as soon as possible to support meeting the planned milestone schedule. Coordination with the Airways Facilities Division should, as a minimum, provide confirmation that the requested procedure does not conflict with existing or planned projects that will impact facility availability or performance.

5.Coordination with the airport management

Coordination with the airport management must also be accomplished and documented. The primary purpose of this coordination is to determine if the airport manager, local governments or community groups have any objections to the requested approach. If it is evident that objections are likely, the Air Force should be informed and asked to validate their request before initiating the necessary environmental reviews.

c. Environmental Reviews

Environmental Reviews for this area are essentially the same as all other SIAP requests. The exception is when the procedure will only be published in military publications. In that case, only written assurance to the FPO is required from the Air Force that environmental requirements have been satisfied.

d. Preparation of the Fight Procedures Development Package

Preparation of the Fight Procedures Development Package and Transmission to AVN is the same as all other SIAP requests. When preparing the package two things should be accomplished.

(1) Two identical packages are required. One is to be retained in the FPO permanent records for use as necessary. The second package is to be transmitted to AVN-100 for use in developing, processing, and maintaining the flight procedure.

(2) The Air Force regional representative is to be informed when the development package has been forwarded to AVN.

363. FORMULATION PHASE

The objective of this phase is to develop, process and publish an instrument approach procedure in accordance with the regional FPO specifications to meet user requirements. The Formulation Phase is the last phase in the process. The development work is accomplished by AVN-100. The FPO retains oversight responsibility and must monitor

formulation activities as necessary to ensure effective and efficient processing of each instrument procedure.

Open communications must be maintained between all organizations involved in the formulation process to ensure timely publication of the procedure. The FPO must be advised immediately of any complications having the potential to delay publication so that appropriate notifications can be effected.

a. Formulation of a U.S. Air Force SIAP

The activities involved in managing the processing, development, and publishing of this type of approach normally include the following:

- (1) A review by the developing organization of the Flight Procedures Development Package to ensure that all required data has been supplied, verification of the data, and an assessment of the probability of meeting the specified publication date.
- (2) Initial development based on specific guidance contained in the FPO Procedures Development Package.
- (3) An assessment of design opportunities to optimize operational benefits.
- (4) Coordination with the controlling ATC facility.
- (5) Decisions concerning needs for Extended Service Volume (ESV), and additional Airspace requirements.
- (6) Modification or refinement of the procedure as necessary to meet FPO requirements and to maximize benefits when possible.
- (7) Consultation between the developing organization and the FPO to ensure the adequacy of the final procedure development or to identify and make required modifications.
- (8) Arranging for required flight inspections and issuing notification of completion and results to the FPO and NFDC.
- (9) Preparation of the required 8260 forms and transmittal to the FPO and DMAAC.
- (10) A quality review of the approach as published by both the developing organization and the FPO followed by consultation to confirm that the approaches properly published or identify and execute necessary corrective actions.

The major activities and normal flows for US Air Force procedures are shown in Figures 361-1 through 361-3

364. - 369. RESERVED.

US AIR FORCE PROCEDURES WORKFLOW DIAGRAM - ELIGIBILITY PHASE

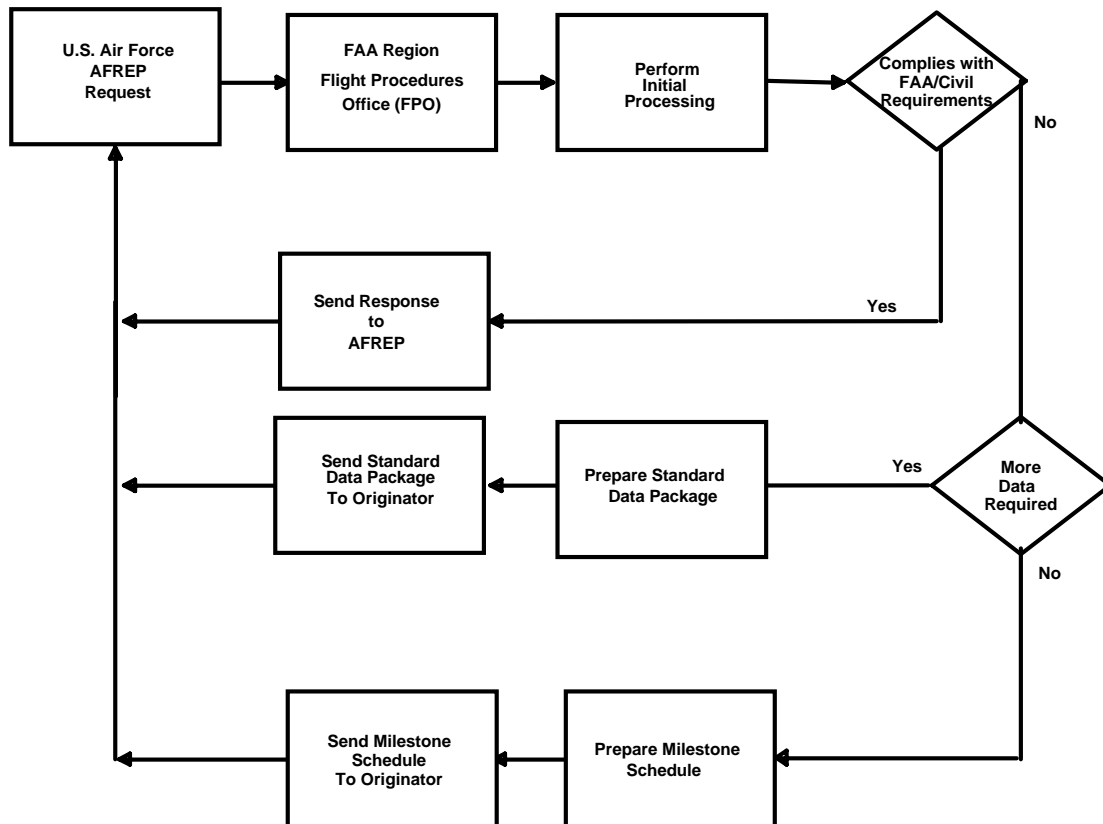


FIGURE 361-1

US AIR FORCE PROCEDURES WORKFLOW DIAGRAM - APPROVAL PHASE

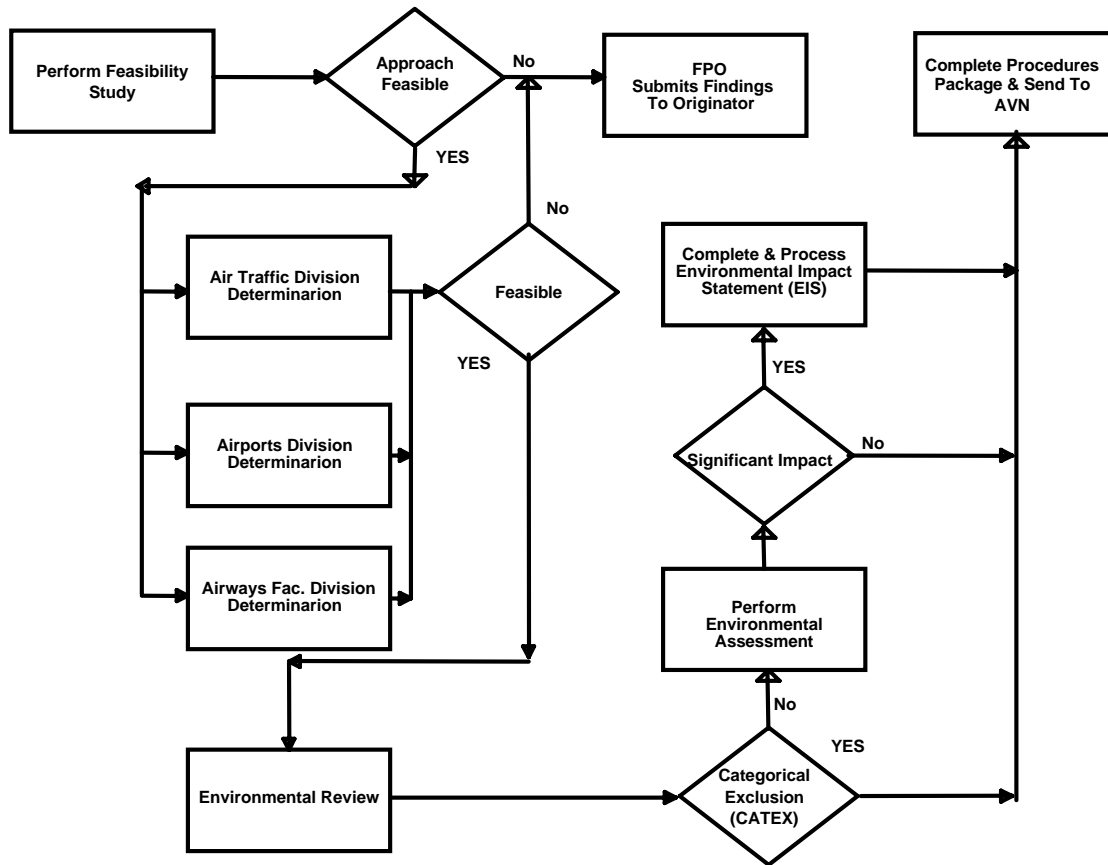


FIGURE 361-2

US AIR FORCE PROCEDURES WORKFLOW DIAGRAM - FORMULATION PHASE

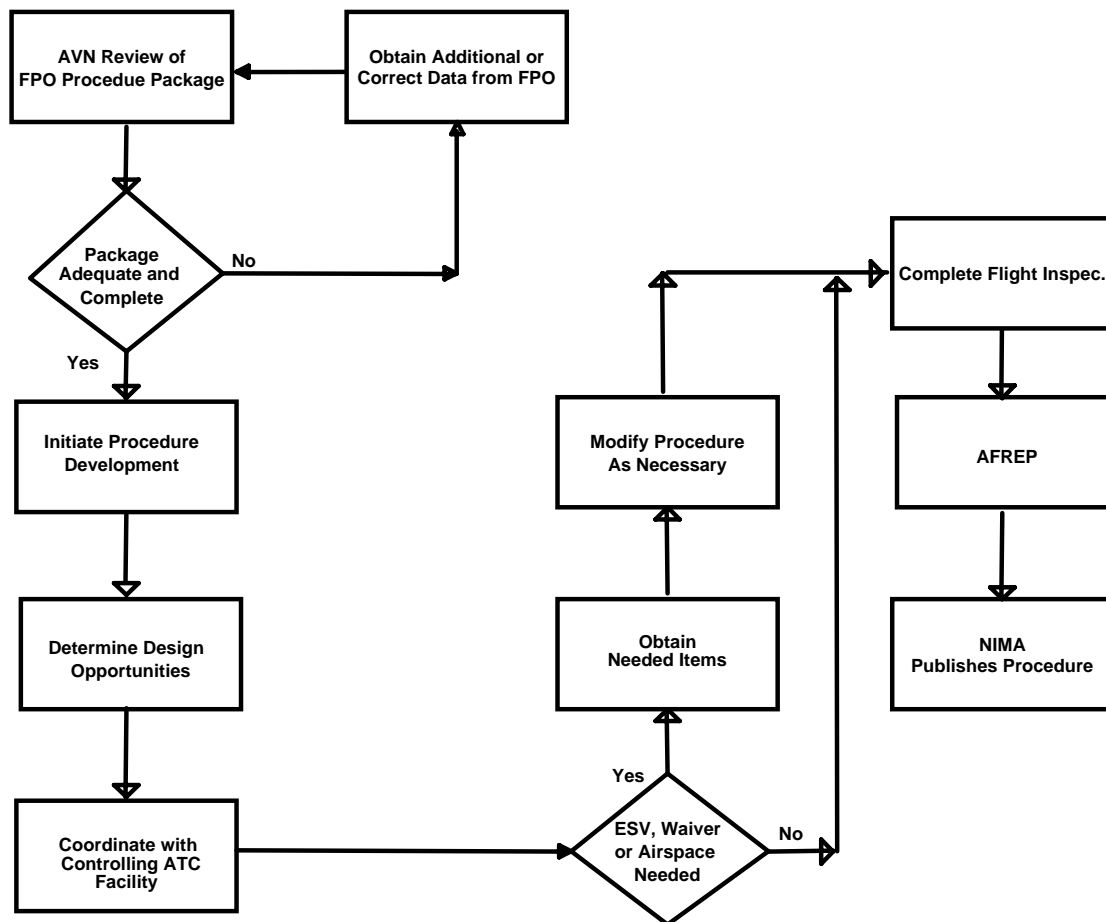


FIGURE 361-3

Section 7. INSTRUMENT FLIGHT RULES (IFR) TAKEOFF MINIMUMS AND DEPARTURE PROCEDURES.

370. GENERAL

This section contains the policy, procedures and processes for establishing Instrument Flight Rules (IFR) Takeoff Minimums and Departure Procedures. FAA Order 8260.3B, chapter 12, FAA Order 8260.40 (as amended), FAA Order 8260.44 (as amended), and FAA Order 8260.46 (as amended) all contain various criteria for the development of specific departure procedures. A departure evaluation is required for each runway or takeoff of an IFR airport/heliport and based on that evaluation, takeoff minimums are developed and, if required, a departure procedure is established. In addition to the basic departure procedures process, special RNAV and FMS departure procedures may also be developed as well as those departure procedures required or requested by Air Traffic. The latter were formally referred to as Standard Instrument Departures (SIDs). Most, if not all, of these orders are being revised at the writing of this handbook. You should consult with your respective Branches for the most current policy and guidance relating to departure procedures.

Many previously designed departures (SIDs) do not comply with the current policy and criteria. Departures. These procedures are being reviewed and amended as necessary to comply with current criteria.

Definitions and Organizational Descriptions:

Flight Procedures Office (FPO). The FAA office in the region responsible for the management of all aspects of instrument flight procedures within the region's geographic area of responsibility. The FPO specifically approves/disapproves requests for instrument procedures, prepares the development package to specify how a procedure is to be developed, and performs the final quality control review of the procedures developed by AVN.

Office of Aviation System Standards (AVN). The FAA office responsible for standardized application of criteria for instrument flight procedures and validation of required data as well as Flight Inspection certification of both facilities and procedures.

National Flight Data Center (NFDC). The FAA headquarters office responsible for validation of data depicted on aeronautical charts and for compilation of procedures proposed for inclusion in Federal Aviation Regulation (FAR) Part 97.

National Ocean Service (NOS). The Federal agency responsible for the charting of FAA FAR Part 97 civil instrument procedures.

SID. Standard Instrument Departure. An obsolete term. This has been replaced by the term Departure Procedure (DP) and describes either a textual or graphic procedure for departing an airport under Instrument Flight Rules (IFR).

DP. Departure Procedure. Replaces the obsolete term SID. It is either a textual or graphic procedure for departing an airport under Instrument Flight Rules (IFR).

DER. Departure End of the Runway (the farthest end of the runway in the direction of takeoff).

OIS. Obstacle Identification Surface.

371. REVIEW AND DEVELOPMENT PROCESS

The FPO is responsible for monitoring the entire process. The actual development is accomplished by the appropriate Flight Procedures Development Branch in Oklahoma City. The process starts when Air Traffic (or other entity including AVN) submits a request for a DP to the FPO for submission. Eligibility criteria is very simple - any airport having instrument approach capabilities is eligible, and in fact required to have instrument departure capability evaluated. Conversely, current agency policy excludes airports not having instrument approach capability from consideration.

Any discrepancies, required adjustments, or improvement suggestions noted in the center request during the FPO review process should be coordinated with the sponsoring air traffic facility to prepare a package representing a complete specification of requirements to assist the developing organization in completing the work. Adherence to this review/improvement process will allow completion in a timely and efficient manner.

372. TYPES OF DEPARTURE SERVICES

There are two general types of departures. These are, Diverse Departures, and Departure Routes. Each is discussed in the following paragraphs.

a. DIVERSE DEPARTURES

These departures are used at many airports where a prescribed departure route is not required for air traffic control purposes or obstacle avoidance. At other airports there may be obstacles in the vicinity of the airport that should be considered in determining what restrictions, if any, are to be prescribed. Obstacle Clearance Areas (OCA) and Obstacle Identification Surfaces (OIS) have been established to provide the basis necessary for sound determinations regarding the need for restrictions, limitations, or special instructions. These surfaces are outlined in the various orders at noted in paragraph 370.

b. DEPARTURE ROUTES

There are three basic types of departure routes: straight, turning, and combination straight and turning. Departure routes are based on positive course guidance acquired within 10 nautical miles from the DER on straight departures and within 5 nautical miles after completion of turns on departures requiring turns. Surveillance radar when available is an acceptable means of

providing positive course guidance. The specific instructions for each of these items are found in the various orders noted in paragraph 370.

373. DEVELOPMENT INSTRUCTIONS

The FPO specialist will often have the most complete knowledge and understanding of obstacle situations for runways in his/her geographic area of responsibility. When appropriate that knowledge and understanding should be made available to the development specialist in the form of special instructions. These special instructions should include the rationale for their inclusion in the development package.

374. FPO QUALITY CONTROL

The FPO should review the developed procedure to confirm that the following factors have been considered and treated appropriately in the development process:

- (1) Ensure that the departure procedure terminates at a fix or route segment that will establish the aircraft in the enroute environment.
- (2) Ensure that the required 40:1 obstacle clearance is applied to all runways having authorized instrument departures until the aircraft is established in the en route environment.
- (3) Ensure an MEA has been assigned for all segments after the first fix when the departure is based on pilot navigation or dead reckoning.
- (4) Ensure that 1000 feet of obstacle clearance is provided for segments of level flight when the departure procedure employs maximum or mandatory crossing altitudes.
- (5) Climb gradients in feet per nautical mile are specified only when required for obstacle clearance.
- (6) Ensure that sectors for unrestricted radar vectoring are included in the "REMARKS OR PROCEDURAL DATA NOTES NOT TO BE CHARTED" section of the DP form.
- (7) Ensure that lost communications instructions, where required, are provided by Air Traffic for departure procedures that incorporate radar vectors to assure obstacle clearance and/or navigational guidance.

375. Environmental Reviews

Environmental Reviews for Departure Procedures (DP) originating with AVN are essentially the same as all other SIAP requests. If the DP is requested by Air Traffic, the environmental responsibilities belong to Air Traffic and must be completed prior to submission to the FPO for development. Preparation of the Flight Procedures Development Package and Transmission to AVN is the same as all other SIAP requests.

377. - 379 RESERVED

Section 8. NATIONAL AIRSPACE SYSTEM MAINTENANCE.

380. GENERAL

The National Airspace System (NAS) is a very sophisticated system that requires continuous updating to keep pace with the rapid advancement of aviation and its associated technologies. These forces impose increasing demands for improved and expanded NAS services. The FAA must continue to maintain the system to protect the integrity of current services while implementing the changes necessary to meet user expectations and demands.

The flight procedures program is a critical element of the NAS and its program managers face similar problems and or conflicts associated with changing technologies and user demands. Early experience with Global Positioning Systems (GPS) and Flight Management Systems (FMS) have raised concerns that current capabilities will at least be strained by the anticipated demands generated by both of these systems. Two facts should be clear to all involved in the program. First and foremost current procedures program capabilities must be properly maintained to protect system integrity. Second, the anticipated demands of GPS and FMS will be met. Satisfying both needs will require that the program managers be more pro-active and innovative in developing and executing initiatives that will allow absorption of the workload increases while maintaining the high performance level of the current system that the users expect and deserve.

Definitions and Organizational Descriptions:

Flight Procedures Office (FPO). The FAA office, under AVN, located in the region responsible for the management of all aspects of instrument flight procedures within the region's geographic area of responsibility. The FPO specifically approves/disapproves requests for instrument procedures, prepares the development package to specify how a procedure is to be developed, and performs the final quality control review of the procedures developed by AVN.

Office of Aviation System Standards (AVN). The FAA office responsible for standardized application of criteria for instrument flight procedures and validation of required data as well as Flight Inspection certification of both facilities and procedures.

National Flight Data Center (NFDC). The FAA headquarters office responsible for validation of data depicted on aeronautical charts and for compilation of procedures proposed for inclusion in Federal Aviation Regulation (FAR) Part 97.

National Ocean Service (NOS). The Federal agency responsible for the charting of FAA FAR Part 97 civil instrument procedures.

DER. Departure end of the runway (the farthest end of the runway in the direction of takeoff).

OIS. Obstacle Identification Surface.

381. PERIODIC REVIEWS

Agency policy requires that each instrument procedure be reviewed on a periodic basis. The frequency of the required reviews changes with the type of procedure, but usually range from every two years to every four years. These reviews shall assure that requirements for obstacle clearance, navigational guidance, safety, practicality, and conformance to current standards are met.

This requirement is usually accomplished jointly with AVN but the FPO can help ensure that all required reviews are accomplished and properly documented. The annual review process typically involves the following activities:

- (1) Reviews or validation of feeder routes, all segments of the approach, and departure routes to determine if flight altitudes are adequate or need to be changed and if so in what way.
- (2) Reviews to ensure that minimums meet criteria and that the supporting forms conform to current standards.
- (3) Checks to ensure that published SIAP's are portrayed correctly.
- (4) Initiate action for AVN to cancel standard instrument approach when action has been determined to be warranted.
- (5) Initiate action for Air Traffic to redesignate air space as appropriate.

382. REVIEW FOR CONTINUED NEED

The agency policy has always been that procedures will be established and maintained only when doing so results in a clear benefit to the public. The lack of numeric value levels to make decisions regarding continued use of a procedure has traditionally been a major difficulty and detriment. Recognizing that technological advances may also have resulted in decreasing demands or use of more basic navigation/approach systems, the following guidance is to be used when evaluating procedures for continued use.

- (1) A procedure will be retained at locations served by air carrier or air taxi operators provided they certify in writing that the procedure is needed to adequately support their operations.
- (2) A procedure will be retained if it is necessary to support alternate airport requirements.
- (3) A procedure will be retained if it is necessary to support an IFR departure for the airport.
- (4) A procedure will be retained if it is required to support training requirements and relieve traffic at nearby Hub airports.

(5) A procedure will be retained if it supports a military requirement.

(6) A procedure will be identified as a candidate for discontinuance if it does not meet at least one of the conditions specified in items 1 through 5 and its activity has fallen below 60 percent of that required for establishment of facility type that supports the procedure. The Air Traffic activity reports for the most current year will be used as the basis for determining activity level change.

After identifying a procedure as a candidate for discontinuance, the FPO should notify all FSDO's in the region's geographic area of responsibility and solicit their assistance in obtaining user input. A six month period should be allowed for collection of user input. The data obtained during this period should then be reviewed to make a subjective judgment as to whether continuation of the procedure is justified based on the level of benefit to the public. If appropriate, action should then be initiated to discontinue the procedure.

383. OTHER REVIEW/MAINTENANCE ACTIVITIES

FPO personnel should take advantage of all opportunities to obtain information that may be indicative of the usefulness of a particular procedure or user overall assessments of the regional portion of the NAS. This kind of information can normally be obtained directly or indirectly from the public at Safety Seminars, Listening Sessions, meetings with State Aviation Officials, etc. While operating within the system as either aircrew or observers is highly recommended, direct contact with local airmen and operators in the operational environment can also be achieved by occasionally accompanying FSDO inspectors on their visits to local airports. In most cases the local operators will be very willing to identify what's working and what's not working and are usually not reluctant to state reasons for their beliefs.

384. - 389 RESERVED.

Section 9. SUPPORTING DOCUMENTATION

390. GENERAL

This section contains instructions for the use of documents critical to the effective management of the agency Flight Procedures Program.

391. FPO STANDARD DATA PACKAGE

The FPO Standard Data Package is a comprehensive document, which contains instructions for recording required data in appropriate fields. The package includes all Airport Data, Facility Data, Lighting Data, Weather Service Data, Air Traffic Control Data, Environmental Checklist for Categorical Exclusion documentation and other pertinent information required for developing any type of instrument procedure. The data package format serves both as a checklist to ensure a request for a procedure contains all required data to the appropriate accuracy levels and as an excellent data collection device.

The package is included as [Appendix III](#)

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APPENDIX I: MEMORANDUM OF AGREEMENT BETWEEN FLIGHT STANDARDS SERVICE AND AVIATION SYSTEM STANDARDS

WHEREAS, there has been a significant realignment of functions along the lines of business between the Flight Standards Service, hereinafter referred to as the AFS, and the Aviation System Standards, hereinafter referred to as the AVN;

WHEREAS, policy for matters related to the instrument flight procedures and all weather operations programs have been consolidated within the AFS, and responsibility for the overall implementation of the development of instrument flight procedures and related matters is consolidated within the AVN;

WHEREAS, the Regional Flight Procedures Branches (AXX-220) have been organizationally transferred from AFS to AVN, and the Standards Development Branch (AVN-210) and the policy portions of the Flight Procedures Branch (AVN-220) have been transferred from AVN to AFS;

NOW, THEREFORE, the AFS and the AVN mutually agree as follows:

ARTICLE I - Affected Directives and Advisory Circulars

The AFS and AVN acknowledge that numerous FAA directives and advisory circulars refer to the AFS as responsible for functions, which have been transferred to the AVN as a result of the organizational realignment and this MOA.

Therefore, both parties mutually agree that until such time as those affected directives and advisory circulars are amended, references to the AFS as being responsible for some action which has clearly been transferred, shall be interpreted as an AVN responsibility.

ARTICLE II - Instrument Flight Procedures.

A. Public Standard instrument Flight Procedures

The AFS develops criteria, policy for eligibility, prioritization, and implementation, and administers the rule making process, authorizing use of public instrument flight procedures.

The AVN is responsible for the application of eligibility standards, prioritization, administrative control, instrument flight procedure development, and all routine maintenance to Include NOTAM's In accordance with current directives. Additionally, the AVN is the primary interface with the user community for instrument flight procedure development,

B, Special Instrument Flight Procedures

The AFS sponsors and issues special instrument flight procedures. The AFS will, at its discretion, develop non-standard criteria for special instrument flight procedures application.

The AVN develops and maintains special instrument flight procedures in accordance with Federal Aviation Administration (FAA) directives and AFS policy guidance at the request of the AFS.

C Foreign Terminal Instrument Procedures.

The AFS retains responsibility for civil foreign terminal instrument procedures under current FAA directives.

The AVN is responsible for DOD foreign terminal instrument procedures in accordance with the applicable FAA directives.

ARTICLE III - CAT II/III Precision Approach Procedures

The AFS is the final authority for the approval of CAT II/III operations. The AFS coordinates with the AVN on areas of joint concern and interest as necessary to complete approval of CAT II/III operations.

The AVN completes all regional CAT II/III precision approach procedure implementation tasks, including coordinating the CAT II/III checklists, and develops and maintains the instrument procedure.

ARTICLE IV - Surface Movement Guidance and Control System (SMGCS) Plans.

The AFS coordinates and approves all SMGCS plans in accordance with current directives.

The AVN provides technical support for CAT II/III precision approach procedure issues that develop during the SMGCS plan development process.

ARTICLE V - Waivers to Standards,

The AFS provides the equivalent level of safety for special instrument procedure waivers, and coordinates with the AVN as necessary to support public instrument flight procedures waivers. The AFS is the final approval for all instrument flight procedure waivers.

The AVN will apply instrument flight procedures criteria, identify those aspects of procedure design which require waivers, and develop the waivers in coordination with the AFS in order to complete development of an instrument flight procedure.

ARTICLE VI - Environmental Issues,

The AFS provides policy guidance for environmental considerations relative to instrument procedures, and is the focal point for 14 CFR Part 1.50 studies relative to Aircraft performance characteristics and safety considerations.

The AVN will apply national environmental standards/policies relative to the establishment of all instrument procedures for which they have developmental responsibility.

ARTICLE VII - Airport Airspace Analysis

A. Landing Area Studies.

The AFS provides review and input to regional studies related to operational safety and safety of persons/property on the ground; and approves modifications to airport design standards. AFS performs on-site evaluations required for heliport and seaplane landing area (NRA) studies, and may provide technical expertise for site inspections related to airport studies. AFS determinations, including studies referred by AVN, will be provided to the OPR.

The AVN assumes responsibility for evaluation and comment on all airport proposals related to IFR impact. Routine coordination with the AFS point of contact is expected on studies of joint interest.

B. Navigational Aid (NAVAID) Studies.

The AFS transfers all related functions to AVN.

The AVN performs all NAVAID site studies and regional coordination aspects of facility commissioning/decommissioning and routine maintenance requirements, including NOTAM's related to instrument procedures.

ARTICLE VIII - Capacity

The AFS retains responsibility for promulgation of national policy for instrument flight procedure aspects of capacity programs. At the regional level, the AFS is the local point for operational aspects and matters relative to aircraft performance characteristics.

The AVN provides technical input related to instrument flight procedure criteria for regional capacity studies and initiatives.

ARTICLE IX - Air Traffic Operational Requirements

The AFS transfers all functional responsibilities related to Air Traffic procedures development and technical support activities; e.g., Minimum Instrument Altitude (MIA) and Minimum Vectoring Altitude (MVA) charts, Standard Arrival Routes (STAR's) and Standard Instrument Departures (SID's) procedures, etc., to the AVN.

The AVN assumes all instrument flight procedures functional responsibilities as indicated above.

ARTICLE X - Flight Inspection Coordination

The AFS transfers all regional flight inspection liaison activities to the AVN.

The AVN performs regional flight inspection coordination activities as determined necessary by its Program Director.

ARTICLE XI - National Airspace System (NAS) Change Proposals (NCP's),

The AFS retains regional division level signature authority for NCP's.

The AVN reviews NCP's to Identify AVN concerns.

ARTICLE XII - Facilities and Equipment (F&E) Budget Functions,

The AFS roles and responsibilities are being transferred except for AFS projects; e.g., SPAS, PENS, etc.

The ATS assumes all regional F&E roles and responsibilities previously assigned to the Regional Flight Procedures Branches.

ARTICLE XIII - Obstacle Evaluation (OE) Studies,

The AVN analyzes all OE proposals and determines the impact on minimums or flight altitudes of all civil, U.S. Air Force joint-use airport, and U.S. Army Instrument flight procedures. The AVN and AFS agree that it is an Air Traffic responsibility to identify the possible affect on visual flight operations and coordinate with the AFS point of contact, as necessary. Petitioned OE cases based on AVN determinations will be reviewed by AVN. The AFS performs Washington office review of petitioned OE cases that are based on regional FS determinations.

ARTICLE XIV - Effective Date,

This agreement supersedes the previous agreement dated 8/28/95, and will become effective upon the date of the signature of the last party.

ARTICLE XV - Renegotiations

This agreement may be renegotiated at any time at the request of either party and shall expire not later than COB December 31, 1998.

Original Signed by William H. Williams, Jr.

3/21/97

Agree: _____
Program Director of Aviation System Standards, AVN-1

Date: _____

Original Signed by W. Michael Sacrey

4/1/97

Agree: _____ Date: _____

Director, Flight Standards Services, AFS-1

APPENDIX II: SIGNIFICANT REFERENCES and INTERFACES

Significant References and Interfaces. Processing requests for instrument approach services often requires the use of a variety of reference materials and interaction with several organizations. A listing of the most commonly used legal references, Federal Aviation Regulations, internal directives and forms follows. Guidance is also provided in Policy Memoranda that are often temporary pending publication of the policy in an appropriate directive for long-term use. These are not listed. Each FPO should maintain a listing of current Policy Memoranda. A listing of the organizations often involved in the process is also included.

(NOTE: Although amendments of publications are shown, it must be understood that the intent is to use the latest edition of the publication regardless of the amendment suffix shown herein.)

Legal References:

49 United States Code

49 USC 1346 (305), Fostering of Air Commerce.
49 USC 1348 (307), Airspace Control and Facilities.
49 USC 1354 (313), Other Powers and Duties of the Administrator.
49 USC 1421 (601), General Safety Powers and Duties.
49 USC 1355 (314), Delegation of Powers and Duties to Private Persons.
49 USC 1502 (1102), International Agreements.
49 USC 1156 (Section 7), International Aviation Facilities Act.

Federal Aviation Regulations

FAR 77 Objects Affecting Navigable Airspace.
FAR 91 General Operating and Flight Rules.
FAR 97 Standard Instrument Approach Procedures.
FAR 121 Certification and Operations: Domestic, Flag, and Supplemental Air Carriers and Commercial Operators of Large Aircraft.
FAR 135 Air Taxi Operators and Commercial Operators.
FAR 152 Airport Aid Program.
FAR 157 Notice of Construction, Alteration, Activation, and Deactivation of Airports.
FAR 171 Non-Federal Navigation Facilities.

FAA Orders

Order 1050.1D Policies and Procedures for Considering Environmental Impacts.
Order 1380.51 Program Tracking and Reporting Subsystem
Order 5090.3 National Plan of Integrated Airports (NPIAS).
Order 6700 .20 Non-Federal Navaids and ATC Facilities.
Order 6750.14B Instrument Landing System (ILS) and Ancillary Electronic Components.
Order 7400.2D Procedures for Handling Airspace Matters.

Order 8200.1 United States Standard Flight Inspection Manual.
 Order 8200.24A Policy With Respect to Flight Inspection of Air
 Navigation Facilities in Foreign Territory.
 Order 8260.3B United States Standard for Terminal Instrument
 Procedures (TERPS)
 Order 8260.13 US Army Standard Instrument Approach Procedure.
 Order 8260.15C US Army Terminal Instrument Procedures Service.
 Order 8260.19C Flight Procedures and Airspace.
 Order 8260.20 US Army Standard Instrument Approach Procedure
 (Continuation Sheet).
 Order 8260.21 US Army Departures Procedure/Takeoff minimums.
 Order 8260.26B Establishing and Scheduling Instrument Approach
 Procedure Effective Dates.
 Order 8260.31B Foreign Terminal Instrument Procedures.
 Order 8260.32A US Air Force Terminal Instrument Procedure Service.
 Order 8260.36A Civil Utilization of Microwave Landing System (MLS)
 order 8260.40 Flight Management System (FMS) Instrument Procedures
 Development
 Order 8260.44 Civil Utilization of Area Navigation (RNAV) Departure
 Procedures
 Order 8260.46 Instrument Departures Procedure (DP) Program
 Order 8400.8A Procedures for the Approval of Facilities for FAR Part
 121 and 135 CAT III Operations.
 Order 8400.10 Air Transport Operations Inspector's Handbook.

Advisory Circulars:

AC 91-14D Altimeter Setting Sources.
 AC 120-28C Criteria for Approval of Category III Landing Minima.
 AC 129-29 Criteria for Approving Category I and Category II
 Landing Minima for FAR 121 Operators.

Forms:

FAA Form 5010-1 Airport Master Record
 FAA Form 7480-1 Notice of Landing Area
 FAA Form 8240-2 Flight Inspection Report - Very High Frequency Omni
 Directional Range (VOR).
 FAA Form 8240-7 Flight Inspection Report - Instrument Landing System
 (ILS)
 FAA Form 8240-19 Flight Inspection Report - Non Directional Beacon
 (NDB).
 FAA Form 8260-1 Flight Procedures Standard Waivers.
 FAA Form 8260-2 Radio Fix and Holding Data Record.
 FAA Form 8260-3 ILS Standard Instrument Approach Procedure.
 FAA Form 8260-4 Radar Standard Instrument Approach Procedure.
 FAA Form 8260-5 Standard Instrument Approach Procedure.
 FAA Form 8260-7 Special Instrument Approach Procedure.
 FAA Form 8260-9 Standard Instrument Approach Data Record.
 FAA Form 8260-11 ILS-Standard Instrument Approach Procedure U.S. Army.
 FAA Form 8260-12 Radar Standard Instrument Approach Procedure U.S.
 Army.
 FAA Form 8260-15 Departure Procedures/Takeoff Minimum.
 FAA Form 8260-22 MLS Standard Instrument Approach Procedure.

Other Significant Interfaces

AFS-200, Air Transportation Division
AFS-400, Flight Technologies and Procedures Division
AFS-420, Flight Procedures Standards Branch
State Aviation Authorities
Office of Aviation System Standards, AVN
Flight Inspection Central Scheduling Office.
US Military
National Flight Data Center, NFDC
Flight Standards District Offices (FSDOs)
Regional Flight Standards Division
Regional Air Traffic Division.
Regional Airways Facilities Division
Regional Airports Division.
Regional Environmental Net.
International Field Offices
Office of International Aviation, AIA.
FAA Air Traffic Activity Report

AVN Criteria by Letter/cc: Mail

DATE	OFFICE	CRITERIA BY LETTER/CC MAIL
4/18/86	AFS-200	Calculation of Fix Coordinates
4/28/89	AVN-220	TERPS Treatment of Tethered Balloons
3/12/92	AVN-220	Calculation of Terminal Area DME Coordinates
3/14/94	AVN-220	FAA Order 8260.19C, Flight Procedures and Airspace, Advance Change I Information with cc:Mail: AVN-220, 4/8/94 & 12/21/94
2/27/95	AVN-1	Instrument Procedure Signature Authority
8/24/95	AFS-400	Revised Instructions for Completing Flight Procedures Waivers, FAA Form 8260-1
11/17/95	AFS-400	Controlled Airspace Requirements for Instrument Procedures Development with cc:Mail: AFS-420, 5/13/97 "Airspace"
1/22/96	AVN-160	Instructions for Processing Waivers (Being revised)
2/20/96	AFS-1	Implementation of FAA Order 8260.36A, Civil Utilization of Microwave Landing System (MLS) with CC Mail: AFS-420, 2/28/97 "8260.36A paragraph 12" & 1219196, "Application of MLS criteria to ILS"
5/23/96	AVN-160	AVN-160 TERPS Notebook, Page 3: Flight Procedures QC Package (Being revised)
5/24/96	AFS-400	GPS Waypoints with cc:Mail: AFS-420, 2/14/97, "VOR/DME RNAV Criteria"
5/24/96	AFS-400	Update to GPS Procedures Development Criteria with cc:Mail: AFS-420, 8/1/96 "Clarification of May 24,1996 criteria memo"
8/15/96	AFS-440	Selection of Controlling Obstacles for Instrument Procedures with cc:Mail: AFS-420, 3/28/97 "Documentation of 289 obstacles" & AVN-160, 11/27/96 "Selection of controlling obstacles"
11/4/96	AFS-400	Turboprop Holding Airspeeds with cc:Mail: AVN-160, 11/27/96 "8260-2 holding entries"
1/31/97	AVN-100	TERPS Guidance (deleting "or GPS) with cc:Mail: AFS-420, 12/23/98 "Removal of "or GPS"
2/14/97	AFS-1	Special Procedure Processing Flow and Responsibility
3/21/97	AFS-400	Revised Transponder Landing System (TLS) Procedure Construction Policy
4/4/97	AFS-1	Localizer Directional Aid (LDA) with Glide Slope Procedure Construction Criteria

4/22/97	AVN-160	Guidance on AWOPS/ASOS with cc:Mail: AFS-420, 3/20197 "Com-transceivers and AWOPS/ASOS," 7/23/96 "Ground rules for ASOS" & AVN-160, 3/11/98 "Use of AWOPS/ASOS to satisfy alt min needs"
6/2/97	AVN-160	Significant Terrain 8260-9 Entries
6/24/97	AFS-440	Copter ILS and 8260.37, Helicopter Civil Utilization of Collocated Microwave Landing System (MLS)
7/1/97	AFS-440	Cat II/III Final Trapezoids for ILS and MLS
1/30/98	AFS-420	GPS Helicopter Holding Criteria
2/17/98	AFS-420	SCAT-I Procedure Naming - Interim Policy Guidance
2/25/98	AFS-420	New Survey Information - Ellipsoidal Height; AVN-210 Facsimile 1/5/98
3/2/98	AFS-420	Temporary Cessation to Processing of Terminal Arrival Area (TAA) and Instrument Departure Procedures (only ref. to TAA still in effect)
3/9/98	AFS-420	Course Reversal Holding Over the FAF for GPS Approaches
3/20/98	AFS-420	Policy for Application of Reduced Military Required Obstacle Clearance
3/20/98	AFS-420	Policy for Establishing Directive Effective Dates
4/2/98	AFS-420	NOTAM's for Special Procedures
4/29/98	AFS-420	Criteria Change, FAA Order 8260.38A, Civil Utilization of Global Positioning System (GPS)
6/8/98	AFS-420	Policy on Use of 175 KIAS Holding
6/17/98	AVN-100	The Processing of Special Standard Instrument Approach Procedure (SIAPs) Submitted by Outside Sources
6/29/98	AVN-100	AVN-100 NOTAM Policy (Being revised)
7/1/98	AFS-420	Special Processing to AFS-400
7/8/98	AFS-420	Heliport Survey Requirements for Point-in-space Approach Procedures
7/21/98	AFS-420	FAA Order 8260.3B Chg. 17, U.S. Standard Terminal Instrument Procedures (TERPS) Chapter 9, DH Adjustment
7/22/98	AFS-420	Descent Gradient/Angle on Circling Approaches Meeting Straight-in Alignment
8/4/98	AVN-160	Procedure NA at Night Note
8/7/98	AVN-160	Using the CCP NOTAM for the Good of the NAS Users
8/21/98	AFS-420	Lifting of Moratorium on Development of Instrument Departures (DP)
9/16/98	AFS-420	Instrument Procedure Naming
9/17/98	AFS-420	NOTAM Policy for FAA Developed Military Instrument

		Approach Procedures (IAP) at Civil Airports
9/28/98	AFS-420	FAA Order 8260.3B Change 17, U.S. Standard Terminal Instrument Procedures (TERPS) Paragraph 251 Interim Change
10/23/98	AFS-420	Publishing Descent Angles on Approach Procedures
10/26/98	AVN-100	Process for Handling Orders/Criteria Changes
10/26/98	AFS-420	Denial of Night Minimums for 20:1 Penetrations (with AVN-160 Explanation)
11/6/98	AFS-420	Correction to AFS-420 Memo dated 10/29/98, Additional Policy Guidance for TERPS Change 17 (Includes TERPS Change 17 Implementation Letter, 4/31/98)
12/4/98	AFS-1	Interim RNAV Departure Criteria for /E & /F Aircraft
12/9/98	AFS-420	Implementation of Accuracy Standards for Digital Elev. Data (with 11/20/98 letter)
12/9/98	AFS-420	Accuracy Code for 1:25,000 scale
12/9/98	AVN-160	Standardized Flight Inspection Package
12/21/98	AFS-420	NOTAM Policy for Departure Procedures (with AVN-160 msg. 1/5/99)
1/8/99	AFS-420	TIL99-001 Departure Procedure Support for Air Traffic
1/15/99	AFS-420	TIL99-003, Taxiing Aircraft as Departure Obstructions, AVN-160 cc-Mail of 12/04/98
2/11/99	AFS-400	Special IFR Helicopter GPS "Point-In-Space (PinS) Approaches



Standard Instrument Approach Procedure Data Request and Information Package



Airport and Runway Data - Navigational Aid Facility Data
Weather Advisory Data - Air Traffic Data
Environmental Checklist - Local Altimeter Information
FSDO Locator Map - GPO Bookstore Listing

APPENDIX IIIb Standard SIAP Data Request Package

NAVIGATIONAL FACILITY AND RELATED AIRPORT/HELIPORT DATA REQUIREMENTS

IFR Procedure Data: The sponsor/owner who requests an IFR procedure shall provide the FAA with all of the below listed data needs including required coordinates, distances and elevations. Please note that a LICENSED SURVEYOR must CERTIFY this data. All NAVAID and airport positioning coordinates must be determined in accordance with North American Datum 1983 for the contiguous United States and Alaskan areas. (Sample Latitude/Longitude format: 43-21-58.97N - 095-14-57.35W) The sponsor must provide four copies of a FAA approved Airport Layout Plan (ALP) or scaled engineering drawing. Please fill in the appropriate data fields that are listed below and are not included in the ALP and leave blank those fields that are not applicable to the procedure request. Return the completed form to (*insert regional Address and Flight Procedures Branch routing symbol*).

A. Airport Information.

1. Type of approach requested. (NDB, VOR, ILS, MLS, Non Precision GPS, Precision GPS, Wide Area GPS, etc.).

a. Approach_____

b. Runway_____

c. Is this approach for "Public" or "Private" use?_____

2. Airport/Heliport Identifier_____

3. Official Airport/Heliport Name_____

4. Airport/Heliport Address (Street, City, State, Zip Code)

a. Street_____

b. City, State, Zip Code_____

5. Official Airport/Heliport Owner_____

6. Airport/Heliport Manager.

a. Name_____

b. Telephone Number (include area code)_____

7a. Airport Reference Point (ARP): This is the official airport location and should be depicted on the ALP. Advisory Circular 150/5300-13, Airport Design, explains the correct method for determining the ARP. However, when only one runway is involved, the exact half waypoint on the centerline of the runway should be used as the ARP. The format for reporting the ARP is degrees, minutes and seconds of latitude and longitude. The coordinates must be reported

to the nearest one-tenth of a second or a horizontal geodetic accuracy of plus or minus ten feet.

Latitude: _____ Longitude: _____

7b. Heliport Reference Point (HRP): This is the official heliport location and is defined in Advisory Circular 150/5390-2A. The same Latitude/Longitude format is used to report the HRP as noted above.

Latitude: _____ Longitude: _____

8. Airport/Heliport Elevation (highest point on any airport usable landing surface) in feet mean sea level (MSL) _____

9. Airport/Heliport Hours of Operation (indicate in local time).

a. Monday through Friday _____

b. Weekends and Holidays _____

B. Landing Area Information:

(Items 1 through 14 refer to Airports)

1. Runway Number: _____

2. Runway true bearing or geodetic azimuth in degrees, minutes, and seconds to the nearest one-hundredth of a degree: _____

3. Runway threshold coordinates at the runway centerline on the approach side of the runway threshold stripes, to the nearest one-hundredth of a second (plus or minus one foot geodetic accuracy): _____

4. Runway threshold elevation in mean sea level referenced to the nearest one-tenth of a foot: _____

5. Runway stop end coordinates at the runway centerline on the stop side of the runway threshold stripes, to the nearest one-hundredth of a second (plus or minus one foot geodetic Accuracy): _____

6. Runway stop end elevation in mean sea level referenced to the nearest one-tenth of a foot: _____

7. Runway width and effective landing length in feet: _____/_____

8. Runway profiles, including elevation of runway ends and displaced threshold, high and low points, grade changes and gradients.

9. Runway Touchdown Zone elevation, which is the highest elevation (MSL) within the first 3000 feet of each landing surface with vertical accuracy computed and submitted to the nearest one-tenth of a foot: _____

10. Runway surface type and condition: _____

11. Type of runway markings (non-precision, precision, or standard) and condition of markings: _____

12. Runway approach slope must clear to 20:1 or 34:1 for at least the approach area criteria as contained in AC 150/5300-13: Yes____ No____

13. Runway safety area size_____ Confirm it is clear in accordance with AC150/5300-13: Yes____ No____

14. Runway obstacle free zone size _____ Confirm it is clear in accordance with AC 150/5300-13: Yes____ No____

The following information is relative to Heliports only.

15. Final Approach and Takeoff Area (FATO) As defined in AC 150/5390-2A

Meets the provisions of AC 150/5390-2A: Yes _____ No _____

16. Approach/Takeoff Path:

Meets the provisions of AC 150/5390-2A: Yes _____ No _____

17. Approach/Takeoff Surface:

Meets the provisions of AC 150/5390-2A: Yes _____ No _____

18. Heliport Marking, Lighting, and Wind Direction Indicators:

Meets the provisions of AC 150/5390-2A: Yes _____ No _____

19. Visual Glide Path Indicators: (Circle one: HAPI, VASI, PAPI, none, other)

If other, please define: _____

C. Runway Lighting:

Information about runway and approach lighting systems is essential in order to visibility reduction credits. Show lighting systems on ALP or engineering drawings.

1. Lights radio controlled Yes____ No____

2. List: _____

3. Frequency for radio activation_____

4. Runway End Identifier Lights (REIL) Yes _____ No____

Type of runway lights (Low Intensity Runway Lights - LIRL, Medium Intensity Runway Lights - MIRL etc.): _____

5. Runway approach light type (None, MALSR, MALS etc.):

Standard/non-standard_____

Length of approach light system in feet. _____

6. VASI/PAPI /Pulsating light approach light indicator (PLASI):

7. Touchdown zone lights: Yes_____ No_____

Standard/non-standard:_____

8. Lead-in lights: Yes_____ No_____

9. RVR: Yes_____ No_____

10. Taxiway lights: Yes_____ No_____

Standard/non-standard_____

11. Runway centerline lights: Yes_____ No_____

12. Displaced or relocated threshold marked and lighted: Yes__ No__

D. Airport Weather Information:

Instrument Approach Procedures can be developed for locations without weather reporting and terminal forecasts; however, if an airport is located within designated mountainous terrain, a local altimeter source must be available, otherwise some procedural restrictions may be required. For example, without weather reporting air taxi and air carrier operators may not be authorized to use the procedures and the airport will not be authorized as an alternate for any operator. National Weather Service (NWS) reports, other than from within two nautical miles of the airport are not usable for instrument procedures.

1. Will Terminal Weather be available? Yes_____ No_____
(If yes, the service will be provided by:)

a. Automated Flight Service Station (AFSS) at:

b. National Weather Service Office (NWS) at:

c. Shared Weather Observation Program (SWOP) at:

d. Supplementary Aviation Weather Reporting Station (SAWRS) at:

e. Limited Aviation Weather Reporting Stations (LAWRS) operated by:

f. Contract Weather Service provided by:

g. Other weather facility - specify:

h. Automated Surface Observation Station (ASOS) at:

i. Automated Weather Observation Station (AWOPS) at:

j. Specify the days of the week and hours of the day the weather is taken:

Sunday	_____	Hours	_____
Monday	_____	Hours	_____
Tuesday	_____	Hours	_____
Wednesday	_____	Hours	_____
Thursday	_____	Hours	_____
Friday	_____	Hours	_____
Saturday	_____	Hours	_____

2. When terminal weather is not available, a local altimeter setting source should be provided in accordance with Advisory Circular AC 90-14D (Attached). Without a local altimeter setting source, a penalty may be applied to the authorized minimums or the procedure may not be authorized.

a. Will a local altimeter setting be installed and available to pilots on request? Yes_____ No_____ Frequency_____

b. Specify the days of the week and hours of the day the altimeter setting will be available.

Sunday	_____	Hours	_____
Monday	_____	Hours	_____
Tuesday	_____	Hours	_____
Wednesday	_____	Hours	_____
Thursday	_____	Hours	_____
Friday	_____	Hours	_____
Saturday	_____	Hours	_____

c. How will the altimeter setting be given to the pilot?

Unicom (frequency)_____

Company radio (frequency)_____

Telephone (number and location)_____

AWOPS/ASOS_____

E. Air Traffic Control Data

1. A telephone or direct line must be available to an air traffic control (ATC) facility 24 hours a day to open and close flight plans. Telephone number _____
This telephone is for "Public" or "Private" use.

2. Will Unicom or an RCO be used to provide pilots with ATC clearance or traffic information? Yes_____ No_____ If yes, specify the frequency and days of the week and hours of the day the ATC information will be available to the pilot.

Frequency_____

Days and hours available

Sunday_____ Hours_____

Monday_____	Hours_____
Tuesday_____	Hours_____
Wednesday_____	Hours_____
Thursday_____	Hours_____
Friday_____	Hours_____
Saturday_____	Hours_____

F. NAVAID Facility Information (as applicable)

1. Facility type (ILS, MLS, GPS, NDB, VOR, etc.)_____

2. Frequency_____

3. Equipment type_____

4. Type of stand-by power_____

5. Number of transmitters_____

6. Facility coordinates to the nearest one-hundredth of a second (horizontal geodetic accuracy of plus or minus 10 feet, vertical geodetic accuracy of plus or minus 1 foot. For multiple component systems, list coordinates for each component.

7. Facility elevation (MSL) accurate to the nearest one tenth of a foot. Elevation values should be entered on the ALP or engineering drawing at all NAVAID component sites. _____

8. Monitor category. Circle one: 1 2 3 4

9. Monitor location (FBO, control tower, fire station, etc.).

10. Location of helicopter area if applicable:

G. Additional Information

for ILS, SDF, GPS, MLS, LDA, or LOC Approaches.

Note: All distances should be accurate to the nearest one-tenth of a foot.

1. Localizer Data

- a. ILS Category _____
- b. True proposed or actual localizer course _____
- c. Localizer Antenna distance from Stop End of the runway _____
- d. Localizer distance/direction from runway centerline _____
- e. Localizer offset _____
- f. Localizer width at runway threshold _____
- g. Localizer Course width _____
- h. Localizer back course usable Yes _____ No _____
- i. Localizer Dual Frequency Yes _____ No _____

2. Marker Data.

a. Outer Marker distance out centerline from runway threshold
_____ Ft.

b. Outer Marker distance perpendicular from runway centerline
extended. _____ Ft.

c. If Outer Marker is LOM with established name, give name.
_____.

d. Outer Marker latitude and longitude.
Lat. _____ Lon. _____

e. Middle Marker distance out centerline from runway threshold
_____ Ft.

f. Middle Marker distance perpendicular from runway centerline
extended. _____ Ft.

g. Middle Marker latitude and longitude.
Lat. _____ Lon. _____

h. Inner Marker distance out centerline from runway threshold
_____ ft.

i. Inner Marker distance perpendicular from runway centerline
extended _____ ft.

j. Inner Marker latitude and longitude.
Lat. _____ Lon. _____

3. Glide Slope Data.

- a. ILS Category _____
- b. Glide Slope angle (accurate to one-hundredth of a degree)

- c. Glide Slope perpendicular distance (feet) from runway centerline:
Distance_____ Direction_____
- d. Glide Slope distance (parallel with runway centerline) to a point
abeam the runway threshold._____
- e. Glide Slope Threshold Crossing Height._____
- f. Glide Slope antenna site elevation._____
- g. Elevation of runway centerline abeam the Glide Slope antenna site.

- h. Glide Slope Antenna Height _____AGL _____MSL
- i. Glide Slope Type (Null Reference Capture Effect etc.).

- j. Glide Slope Antenna latitude and longitude.
Lat._____ Lon._____

H. Airport/Heliport Manager/Owner Certification:

a. After receipt and verification of the information requested in this questionnaire, the development of the instrument approach procedure will begin. All applicable electronic navigational and visual approach lighting aids must successfully pass both a ground check and a flight check by the FAA. The establishment of controlled airspace (if necessary) will become effective concurrent with the publication of the procedure.

b. The establishment of the highest approach category (i.e. A, B, C, D, etc) for your airport will be determined by the FAA's Airports Division/ADO in conjunction with your consulting engineer and your airport authority and will be designated on your ALP. Only those approach categories, up to and including the highest category, as specified, will be published. This will mean that only Category A and B minimums will be published for most smaller airports. In addition, the requirements of Table A16-1, in AC 150/5300-13, Appendix 16 are applicable for establishing the minimum visibility requirements.

c. The above stated information is provided in the interest of establishing a Standard Instrument Approach Procedure (SIAP) to our airport/heliport. I/we understand and acknowledge that if the navigational facility providing guidance for this approach is not a federally-owned and operated facility, the owner MUST provide an electronic technician with a current Federal Communication Commission (FCC) General Radio/Telephone License to maintain the facility. This electronic technician must pass an FAA theory and performance

examination administered by FAA personnel prior to facility commissioning. The owner of the facility must obtain copies of FAA handbooks for maintenance of the navaid and obtain an FCC transmitting license.

d. I concur with the proposal to establish an instrument approach procedure at our airport/heliport and agree to the establishment or modification (if necessary) of controlled airspace approximately 700 feet above ground level (AGL) within approximately 6 nautical miles (with extensions as necessary) of the airport/heliport. I am aware that designation of an instrument runway/heliport may change the existing FAR Part 77 imaginary surfaces for that runway/heliport and that these surfaces are REQUIRED to be free of structures which may be declared obstructions to air navigation under FAR Part 77. If such obstructions cannot be removed or lowered, they will be marked and lighted for night operations. If any of these structures are not under the direct control of the airport/heliport owner, and negotiations with the owner of the object cannot bring suitable results, I understand that the approach minimums may be significantly higher than necessary, night operations may be restricted or denied, or the entire SIAP request may be denied for safety reasons.

Printer/Typed Name: _____

Title: _____

Signature: _____ Date: _____

APPENDIX IVa - Customer Checklist Request Letter

Name and address of sponsor

Date

Dear Mr./Ms:

Thank you for your request for an Instrument Approach Procedure to Runway(s) _____ at _____ Airport, City, St. Such requests are governed by the National Environmental Policy Act and FAA order 1050.1 and FAA Notice 7210.360. Many instrument approaches may be eligible for the "Categorically Excluded" (CE) status as opposed to the more detailed "Environmental Assessment" (EA) or "Environmental Impact Statement" (EIS).

To aid the FAA in its decision of whether or not the approach may be eligible for CE status, we request that you, the sponsor, respond to the enclosed checklist. Please answer the questions as promptly and accurately as possible. Supplying the FAA with more information does not automatically indicate that an EA or EIS is needed. These may not be needed unless FAA identifies an impact based on the information provided.

Please complete the attached checklist and return it to the following address or FAX the completed form to: (123) 456-7890, Attn: XXX FPO

Federal Aviation Administration
Attn: XXX FPO
Address line 1 (PO Box XXX or Street No, etc)
Address line 2 (City, St, Zip)

Please make and keep a copy of this letter and checklist for your records.

NOTE: Depending upon the Regional requirements, the response to this letter and checklist may need to be routed through the respective State.

If you need assistance in filling out the enclosure or you have any questions, please call (Specialist Name) at (123) 456-7890

Program Manager, XXX FPO

Enclosure

APPENDIX IVb - CHECKLIST OF EXTRAORDINARY CIRCUMSTANCES IN SUPPORT OF A CATEGORICAL EXCLUSION (CE) DETERMINATION

The information you provide below will assist the FAA in making its determination as to whether a Categorical Exclusion is appropriate or further environmental analysis is required for your proposed instrument approach(es). Please place a checkmark in the blank next to the numbered items indicating your response on that issue. A checkmark in the "Yes" block does not automatically preclude the development of your instrument approach. It simply means further assessment is needed. Should you have any remarks that may indicate the need to prepare an EA/EIS, attach a brief explanation of the circumstances so that we can evaluate the issue further.

Airport Name: _____ ID: _____

City: _____ St: _____

Project/Action: _____

Circumstance	<u>Impact Potential</u>		Comments/ Follow-Up See attached comments
	Yes	No	
Effect on Section 106 Historic Properties If no properties in, or eligible for inclusion in, the National Register of historic places have been identified within the area of proposed action, it may be considered that there is no Impact Potential.			
Effect on DOT Act, Section (4)(f) Lands If no land is being taken, or used by the proposed action, it may be considered that there is no Impact Potential.			
Controversy on Environmental Grounds If no controversy is known or expected based on the proposed action, it may be considered that there is no Impact Potential.			
Effect on Natural Systems If the overflight of aircraft as a result of the proposed action would have no effect on this circumstance, it may be considered that there is no Impact Potential.			
Effect on Endangered Species			

<p>If the overflight of aircraft as a result of the proposed action would have no effect on this circumstance, it may be considered that there is no Impact Potential.</p>			
<p>Effect on Wetlands</p> <p>If the overflight of aircraft as a result of the proposed action would have no effect on this circumstance, it may be considered that there is no Impact Potential.</p>			
<p>Effect on Floodplains</p> <p>If the overflight of aircraft as a result of the proposed action would have no effect on this circumstance, it may be considered that there is no Impact Potential.</p>			
<p>Effect on Coastal Zones</p> <p>If the overflight of aircraft as a result of the proposed action would have no effect on this circumstance, it may be considered that there is no Impact Potential.</p>			
<p>Effect on Prime/Unique Farmland</p> <p>If the overflight of aircraft as a result of the proposed action would have no effect on this circumstance, it may be considered that there is no Impact Potential.</p>			
<p>Effect on Energy/Resources</p> <p>If the proposed action would have no significant impact on this circumstance, it may be considered that there is no Impact Potential.</p>			
<p>Controversy Regarding Relocation Housing</p> <p>If no relocation housing would be required as a result of the proposed action, it may be considered that there is no Impact Potential.</p>			
<p>Community Disruption</p> <p>If the proposed action would cause no significant disruption, it may be considered that there is no Impact Potential.</p>			
<p>Traffic Congestion</p> <p>If the proposed action would cause no significant increase, or create ground traffic congestion, it may be considered that there is no Impact</p>			

Potential.			
<p>Effect on Noise Levels in Noise Sensitive Areas</p> <p>If no additional noise will be generated by any aircraft utilizing this proposed approach, it may be considered as no impact.</p>			
<p>Effect on Air Quality</p> <p>If the overflight of aircraft as a result of the proposed action would have no effect on this circumstance, it may be considered that there is no Impact Potential</p>			
<p>Effect on Water Quality</p> <p>If the overflight of aircraft as a result of the proposed action would have no effect on this circumstance, it may be considered that there is no Impact Potential</p>			
<p>Contains/Affects Hazardous Materials</p> <p>If the proposed action would have no significant impact on this circumstance, it may be considered that there is no Impact Potential.</p>			
<p>Land Use Conflicts</p> <p>If the proposed action would not result in conflicting land use (with the exception of airport property), it may be considered that there is no Impact Potential.</p>			
<p>Induced Impacts</p> <p>If the proposed action would not induce any significant impacts, it may be considered that there is no Impact Potential.</p>			
<p>Wild and Scenic Rivers</p> <p>If the overflight of aircraft as a result of the proposed action would have no effect on this circumstance, it may be considered that there is no Impact Potential.</p>			

Cumulative Impacts If the proposed action would not result in a significant cumulative impact, it may be considered that there is no Impact Potential.			
Inconsistent With Other Environmental Laws If the proposed action is not inconsistent with other environmental laws, it may be considered that there is no Impact Potential.			
Environmental Justice If the proposed action has not been designed to overfly or avoid specific areas based on underlying area economic considerations.			
Helicopter tracks over major thoroughfares This is a VFR consideration. Helicopters flying Instrument Approaches will not be following major thoroughfares. This proposed action may be considered to have no Impact Potential.			

Additional Comments:

I certify, to the best of my knowledge, that the information provided above is complete and correct, and that there is no information that indicates the need for further environmental analysis unless so identified by a check in the "Yes" column.

Signature: _____

Typed/Printed Name: _____

Title: _____

Date: _____

APPENDIX V. - LOCAL ALTIMETER SETTING SOURCE CHECKLIST AND ASSOCIATED DOCUMENTS RECOMMENDED PUBLICATIONS

1. Required Procedures Checklist
2. Advisory Circular 91-14D (Copy Included)
3. FAR Part 43, Appendix E. (Copy included)
4. Technical Standards Order C10b (Copy Included)

REQUIRED PROCEDURES CHECKLIST

_____ The applicant **MUST** provide two aircraft type sensitive altimeters which meet the systems test and inspection requirements of FAR Part 43, Appendix E, Technical Standards Order C10b, if new altimeters, and/or Advisory Circular 91-14, as amended, as applicable.

_____ Before calling your local Flight Standards District Office (FSDO) for inspection, ensure that the altimeters have been calibrated by a FAA-approved facility within the past 30 days prior to inspection.

_____ Place the altimeters in a location that is maintained at a reasonably consistent temperature, free from drafts.

NOTE: If the altimeters are located in a room heated or cooled by forced air systems, the effect of these systems upon the altimeters should be evaluated.

_____ Proper venting to ensure that if an error in excess of 10 feet is induced by the use of forced air systems, an outside vent (static source) is in use.

_____ Mount altimeters in a box or rack that provides protection from damage by mishandling and ensures a reasonable, permanent location.

_____ The facility **MUST** establish a known height above mean sea level +/- 1 foot that is marked on the instruments or posted immediately adjacent to them.

NOTE: Height measurements may be determined and certified by a surveyor. (Recommended method).

_____ A radio facility (usually UNICOM Frequency) must be available to communicate the altimeter setting information to the pilot.

_____ Provide a list of **TRAINED** and **CERTIFIED** personnel who may make such communications as stated above.

_____ Maintain a log of personnel and altimeter checks as specified by the FSDO inspector.

When all of the above items are in place and ready for inspection, contact your local FSDO and schedule an inspection and certification

visit. The FSDO inspector may also be a good source for advice and assistance if there are any questions concerning the above items.



U.S. Department
of Transportation
Federal Aviation
Administration

ADVISORY CIRCULAR (AC) 91-14D

AC 91-14D
4/9/79

Subject: ~~ALTIMETER SETTING SOURCES~~

1. PURPOSE. This advisory circular provides the aviation public and industry with guidelines for setting up reliable altimeter setting sources.
2. CANCELLATION. Advisory Circular (AC) 91-14C, dated 6/14/78 is canceled.
3. GUIDELINES. An altimeter setting source should either:
 - a. Consist of the Standard Altimeter Setting Indicator (ASI) or;
 - b. Meet the minimum technical requirements specified in paragraph (1) and (2) below and be operated in accordance with paragraph (3).
 - (1) Instrumentation. Two aircraft-type sensitive altimeters should meet the specifications of Technical Standard Order C10b or meet the standards of Federal Aviation Regulation (FAR) Part 43, Appendix E. One aircraft-type sensitive altimeter meeting these specifications may be utilized at locations where a Part 121 or 135 operator has established a procedure for periodic cross-checking of the altimeter as specified in paragraph 3b(2)(iii). The height (of the instruments) above mean sea level, surveyed accurately within one foot, is marked on the instruments or posted immediately adjacent to them. Outside venting of the altimeter or altimeters is necessary only when the room in which the instruments are located is shown to be subject to a pressure differential compared to ambient atmospheric pressure.
 - (2) Calibration. The instruments should be calibrated and recertified to the specifications of Part 43, Appendix E, by an appropriately certificated, FAA-approved instrument repair station.
 - (i) Within 30 days prior to initial installation or retention as a spare, and every 24 months thereafter.
 - (ii) At stations utilizing two altimeters, anytime a difference of more than .05 of an inch of mercury exists between the two instruments with indicator hands set to the

instrument elevation. Immediately after calibration, the difference between the two instruments should not exceed .02 of an inch of mercury.

(iii) At stations utilizing one altimeter, any time a difference of more than .04 of an inch of mercury exists on two successive cross-checks between the station reference altimeter and the mean of the readings obtained from the two altimeters installed in an aircraft maintained under the provisions of Part 121 or the continuous airworthiness maintenance provisions of FAR Part 135.

(iv) The instruments should be calibrated to achieve maximum accuracy in the altitude range at which they will be used. (Instruments so calibrated should be marked "NOT for use in Aircraft.") All readings should be adjusted as required by the altimeter correction card furnished by the calibration station. The instrument should be kept in a temperature-controlled environment similar to the temperature at which the instrument was calibrated.

(3) Procedures The operator should establish procedures to ensure that responsible persons are competent to obtain accurate altimeter settings.

(i) At stations employing two altimeters, a tested method is as follows:

(A) Set both instruments to the posted height, tap or vibrate each to remove friction effects, then reset if necessary.

(B) Adjust the readings as required by the altimeter correction card.

(C) The altimeter setting, in inches of mercury, appears in the small window. The difference between instrument readings may not exceed .05 of an inch. The lower of the readings is the "OFFICIAL" altimeter setting.

(D) The difference between instrument readings should be logged in a permanent record at least once a day.

(ii) At stations using one altimeter, a tested method is as follows:

(A) Set the instrument to posted height, tap or vibrate to remove friction effects, then reset if necessary.

(B) Adjust the reading as required by the altimeter correction card, and record the reading.

(C) From a Part 121 or 135 aircraft parked on a designated ramp area of known elevation, secure altimeter readings from both captain's and first officer's altimeters which should be adjusted to indicate the actual elevation of the ramp plus the height of the instruments above the ramp before the altimeters are read.

(D) Determine the mean of the two aircraft altimeter readings and compare the mean with the reading from the station altimeter. If the difference between the mean and the station altimeter exceeds .04 of an inch, the altimeter setting should be reported as "MISSING." and if the difference exceeds .04 of an inch on two successive crosschecks, the altimeter should be recalibrated before further use.

(E) The cross-check should be done daily, if an aircraft is available, but not less than three times a week. The difference between the reference instrument and the mean of the aircraft altimeter readings should be logged in a permanent record.

(4) System Approvals. Altimeter setting sources installed in accordance with this AC and intended for use with approved instrument approach procedures will require initial approval and periodic inspection by the FAA. Initial approval and annual inspections should be accomplished by the appropriate FAA district office (General Aviation District Office, Air Carrier District Office or Flight Standards District Office).

(5) Future Systems. The FAA and private industry are developing automatic altimeter setting reporting systems that may include wind and other weather elements. Automatic weather reporting systems will be required to meet FAA and National Weather Service accuracy and reliability standards before they can be used to support instrument flight rule operations.

(Original Signed by:)
J. A. FERRARESE
Acting Director
Flight Standards Service

FAR PART 43, Appendix E Reprint

Appendix E--Altimeter System Test and Inspection

Each person performing the altimeter system tests and inspections required by Sec. 91.411 shall comply with the following:

(a) Static pressure system:

- (1) Ensure freedom from entrapped moisture and restrictions.
- (2) Determine that leakage is within the tolerances established in Sec. 23.1325 or Sec. 25.1325, whichever is applicable.
- (3) Determine that the static port heater, if installed, is operative.
- (4) Ensure that no alterations or deformations of the airframe surface have been made that would affect the relationship between air pressure in the static pressure system and true ambient static air pressure for any flight condition.

(b) Altimeter:

(1) Test by an appropriately rated repair facility in accordance with the following subparagraphs. Unless otherwise specified, each test for performance may be conducted with the instrument subjected to vibration. When tests are conducted with the temperature substantially different from ambient temperature of approximately 25 degrees C., allowance shall be made for the variation from the specified condition.

(i) Scale error. With the barometric pressure scale at 29.92 inches of mercury, the altimeter shall be subjected successively to pressures corresponding to the altitude specified in Table I up to the maximum normally expected operating altitude of the airplane in which the altimeter is to be installed. The reduction in pressure shall be made at a rate not in excess of 20,000 feet per minute to within approximately 2,000 feet of the test point. The test point shall be approached at a rate compatible with the test equipment. The altimeter shall be kept at the pressure corresponding to each test point for at least 1 minute, but not more than 10 minutes, before a reading is taken. The error at all test points must not exceed the tolerances specified in Table I.

(ii) Hysteresis. The hysteresis test shall begin not more than 15 minutes after the altimeter's initial exposure to the pressure corresponding to the upper limit of the scale error test prescribed in subparagraph (i); and while the altimeter is at this pressure, the hysteresis test shall commence. Pressure shall be increased at a rate simulating a descent in altitude at the rate of 5,000 to 20,000 feet per minute until within 3,000 feet of the first test point (50 percent of maximum altitude). The test point shall then be approached at a rate of approximately 3,000 feet per minute. The altimeter shall be kept at this pressure for at least 5 minutes, but not more than 15 minutes, before the test reading is taken. After the reading has been taken, the pressure shall be increased further, in the same manner as before, until the pressure corresponding to the

second test point (40 percent of maximum altitude) is reached. The altimeter shall be kept at this pressure for at least 1 minute, but not more than 10 minutes, before the test reading is taken. After the reading has been taken, the pressure shall be increased further, in the same manner as before, until atmospheric pressure is reached. The reading of the altimeter at either of the two test points shall not differ by more than the tolerance specified in Table II from the reading of the altimeter for the corresponding altitude recorded during the scale error test prescribed in paragraph (b)(i). (iii) After effect. Not more than 5 minutes after the completion of the hysteresis test prescribed in paragraph (b)(ii), the reading of the altimeter (corrected for any change in atmospheric pressure) shall not differ from the original atmospheric pressure reading by more than the tolerance specified in Table II. (iv) Friction. The altimeter shall be subjected to a steady rate of decrease of pressure approximating 750 feet per minute. At each altitude listed in Table III, the change in reading of the pointers after vibration shall not exceed the corresponding tolerance listed in Table III. (v) Case leak. The leakage of the altimeter case, when the pressure within it corresponds to an altitude of 18,000 feet, shall not change the altimeter reading by more than the tolerance shown in Table II during an interval of 1 minute. (vi) Barometric scale error. At constant atmospheric pressure, the barometric pressure scale shall be set at each of the pressures (falling within its range of adjustment) that are listed in Table IV, and shall cause the pointer to indicate the equivalent altitude difference shown in Table IV with a tolerance of 25 feet. (2) Altimeters which are the air data computer type with associated computing systems, or which incorporate air data correction internally, may be tested in a manner and to specifications developed by the manufacturer which are acceptable to the Administrator. (c) Automatic Pressure Altitude Reporting Equipment and ATC Transponder System Integration Test. The test must be conducted by an appropriately rated person under the conditions specified in paragraph (a). Measure the automatic pressure altitude at the output of the installed ATC transponder when interrogated on Mode C at a sufficient number of test points to ensure that the altitude reporting equipment, altimeters, and ATC transponders perform their intended functions as installed in the aircraft. The difference between the automatic reporting output and the altitude displayed at the altimeter shall not exceed 125 feet. (d) Records: Comply with the provisions of Sec. 43.9 of this chapter as to content, form, and disposition of the records. The person performing the altimeter tests shall record on the altimeter the date and maximum altitude to which the altimeter has been tested and the persons approving the airplane for return to service shall enter that data in the airplane log or other permanent record.

Table I

Equivalent pressure
(inches of Tolerance Altitude mercury) +/- (feet)

--1,000	31.018	20
0	29.921	20
500	29.385	20
1,000	28.856	20
1,500	28.335	25
2,000	27.821	30
3,000	26.817	30
4,000	25.842	35
6,000	23.978	40
8,000	22.225	60
10,000	20.577	80
12,000	19.029	90
14,000	17.577	100
16,000	16.216	110
18,000	14.942	120
20,000	13.750	130
22,000	12.636	140
25,000	11.104	155
30,000	8.885	180
35,000	7.041	205
40,000	5.538	230
45,000	4.355	255
50,000	3.425	280

=====

Table II--Test Tolerances

Tolerance Test	(feet)
Case Leak Test +/-100	
Hysteresis Test:	
First Test Point (50 percent of maximum altitude)	75
Second Test Point (40 percent of maximum altitude)	75
After Effect Test	
30	

Table III--Friction

Altitude (feet)	Tolerance (feet)
1,000	+/-70
2,000	70
3,000	70
5,000	70
10,000	80
15,000	90
20,000	100
25,000	120
30,000	140
35,000	160
40,000	180
50,000	250

Table IV--Pressure-Altitude Difference

Pressure (inches of Hg)	Altitude difference (feet)
28.10	-1,727
28.50	-1,340
29.00	-863
29.50	-392
29.92	0
30.50	+531
30.90	+893
30.99	+974

(Secs. 313, 314, and 601 through 610 of the Federal Aviation Act of 1958 (49 U.S.C. 1354, 1355, and 1421 through 1430) and sec. 6(c), Dept. of Transportation Act (49 U.S.C. 1655(c)))

[Amdt. 43-2, 30 FR 8262, June 29, 1965, as amended by Amdt. 43-7, 32 FR 7587, May 24, 1967; Amdt. 43-19, 43 FR 22639, May 25, 1978; Amdt. 43-23, 47 FR 41086, Sept. 16, 1982; Amdt. 43-31, 54 FR 34330, Aug. 18, 1989]

Part 514 contains minimum performance standards and specifications of materials parts, processes, and appliances used in aircraft and implements the provisions of sections 3.18, 4a.31, 4b.18, 6.18 and 7.18 of the Civil Air Regulations. The regulation uses the Technical Standard Order system which, in brief, provides for FAA-industry cooperation in the development of performance standards and specifications which are adopted by the Administrator as Technical Standard Orders, and a form of self regulation by industry in demonstrating compliance with these orders.

Part 514 consists of two subparts. Subpart A contains the general requirements applicable to all Technical Standard Orders. These provisions are summarized below for the convenient reference of the public. Subpart B contains the technical standards and specifications to which a particular product must conform, and each Technical Standard Order is set forth in the appropriate section of Subpart B. The subject Technical Standard Order is printed below. ANY TECHNICAL STANDARD ORDER MAY BE OBTAINED BY SENDING A REQUEST TO FAA, WASHINGTON 25, D. C.

SUBPART A--GENERAL

This subpart provides, in part, that a manufacturer of an aircraft material, part, process, or appliance for which standards are established in Subpart B, prior to its distribution for use on a civil aircraft of the United States, shall furnish a written statement of conformance certifying that the material, part, process, or appliance meets the applicable performance standards established in this part. The statement of conformance must be signed by a person duly authorized by the manufacturer, and furnished to the Chief, Engineering and Manufacturing Division, Bureau of Flight Standards, Federal Aviation Agency, Washington 25, D. C.

Subpart A also requires appropriate marking of materials, parts, processes, and appliances as follows:

- (a) Name and address of the manufacturer responsible for compliance,
- (b) Equipment name, or type or model designation,
- (c) Weight to the nearest pound and fraction thereof,
- (d) Serial number and/or date of manufacture, and
- (e) Applicable Technical Standard Order (TSO) number.

In addition, Subpart A provides that no deviation will be granted from the performance standards established in Subpart B, and that the Administrator may take appropriate action in the event of noncompliance with Part 514.

SUBPART B

TSO-C10b

§ 514.20 Aircraft altimeter, pressure actuated, sensitive type - TSO-C10b--(a) Applicability--(1) Minimum performance standards. Minimum performance standards are hereby established for aircraft altimeters which specifically are required to be approved for use on civil aircraft of the United States. New models of altimeters manufactured for such use on or after September 1, 1959, shall meet the standards set forth in SAE Aeronautical Standard AS 392C,^{1/} "Altimeters, Pressure Actuated Sensitive Type," revision date February 1, 1959, ^{2/} with the exceptions listed in subparagraph (2) of this paragraph. Altimeters approved under prior issuances of this section may continue to be manufactured under the earlier provisions.

(2) Exceptions. (i) The following specifically numbered paragraphs in AS 392C do not concern minimum performance and therefore are not essential to compliance with this section: 3.1, 3.1.1, 3.1.2, 3.2, 3.2(a)(b)(c)(d)(e)(f).

(ii) In lieu of Section 7. in AS 392C, it is a requirement that the altimeters covered by this section be capable of successfully passing the test in paragraphs 7.1 through 7.5 and an External Case Pressure Test which is as follows:

External Case Pressure Test. The static pressure source of the instrument shall be sealed when an ambient temperature of 25°C and an ambient pressure of 29.92 inches (absolute) of mercury have been achieved. The ambient pressure shall then be increased at a rate of

20 inches of mercury in two seconds to 50 inches (absolute) of mercury and held at that pressure for three minutes. There shall be no adverse effect on the instrument or its accuracy.

(iii) The "Reference Section" under Table II of AS 392C is not applicable.

(b) Marking. In lieu of the weight specified in Subpart A, the range shall be shown.

(c) Data requirements. One copy each of the following shall be furnished to the Chief, Engineering and Manufacturing Division, Federal Aviation Agency, Washington 25, D. C.:

(1) Manufacturer's operating instructions.

(2) Complete set of instrument's drawings of major components and a test report.

(3) Installation procedures with applicable schematic drawings.

(d) Effective date. September 1, 1959.

^{1/} Copies may be obtained from the Society of Automotive Engineers, 485 Lexington Avenue, New York 17, New York.

^{2/} In addition to the performance standards herein, altimeters when installed in aircraft must meet installation requirements as well as functional and reliability flight tests of the pertinent airworthiness sections of the Civil Air Regulations.



Appendix VI. Government Printing Office Listing

Locate additional data on the web at www.gpo.gov

Through the Superintendent of Documents, the US Government Print Office (GPO) operates 24 US Government Bookstores throughout the country. Each bookstore carries a selection of at least 1500 of the most popular Federal publications, subscriptions and electronic products. Every bookstore can order any of over 12000 titles for sale by GPO. Visit or contact any bookstore for more information. NOTE: VISA and MASTERCARD excepted for purchases. Hours are as noted below, except all are closed on Federal holidays.

U.S. Government Printing Office
710 N. Capitol Street, NW
Washington, DC 20401
Hours: 8:00 a.m. - 4:00 p.m.
Monday through Friday
Phone: (202) 512-0132

Fax: (202) 512-1355

U.S. Government Printing Office
1510 H Street, NW
Washington, DC 20005
Hours: 9:00 a.m. - 4:30 p.m.
Monday through Friday
Phone: (202) 653-5075
Fax: (202) 376-5055

U.S. Government Printing Office
First Union Plaza
999 Peachtree Street, NE
Suite 120
Atlanta, GA 30309-3964
Hours: 8:30 a.m. - 4:00 p.m.
Monday through Friday
Phone: (404) 347-1900
Fax: (404) 347-1897

GPO Order

U.S. Govern
Suite 160,
477 Michig
Detroit, M
Hours: 8:0
Monday thr
Phone: (31
Fax: (313)

U.S. Govern
Warehouse
8660 Cherry Lane
Laurel, MD 20707
Hours: 8:00 a.m. - 3:45 p.m.
Monday through Friday
Phone: (301) 953-7974
Phone: (301) 792-0262
Fax: (301) 498-8995

U.S. Government Printing Office
Robert Morris Building
100 North 17th Street
Philadelphia, PA 19103
Hours: 8:00 a.m. - 4:00 p.m.
Monday through Friday
Phone: (215) 636-1900
Fax: (215) 636-1903

U.S. Government Printing Office



Marathon Plaza, Room 141-S
303 2nd Street
San Francisco, CA 94107
Hours: 8:00 a.m. - 4:00 p.m.
Monday through Friday
Phone: (415) 512-2770
Fax: (415) 512-2776

U.S. Government Printing Office
Room 207, Federal Building
200 N. High Street
Columbus, OH 43215
Hours: 8:00 a.m. - 4:00 p.m.
Monday through Friday
Phone: (614) 469-6956
Fax: (614) 469-5374

U.S. Government Printing Office
O'Neill Building
2021 Third Ave., North
Birmingham, AL 35203
Hours: 8:30 a.m. - 4:30 p.m.
Monday through Friday
Phone: (205) 731-1056
Fax: (205) 731-3444

U.S. Government Printing Office
Texas Crude Building,
801 Travis Street, Suite 120
Houston, TX 77002
Hours: 8:30 a.m. - 4:30 p.m.
Monday through Friday
Phone: (713) 228-1187
Fax: (713) 228-1186

U.S. Government Printing Office
ARCO Plaza, C-Level
505 South Flower Street
Los Angeles, CA 90071
Hours: 8:00 a.m. - 4:00 p.m.
Monday through Friday
Phone: (213) 239-9844
Fax: (213) 239-9848

U.S. Government Printing Office
Room 118, Federal Building
1000 Liberty Avenue
Pittsburgh, PA 15222
Hours: 8:00 a.m. - 4:00 p.m.
Monday through Friday
Phone: (412) 395-5021
Fax: (412) 395-4547

U.S. Government Printing Office

Room 194, Federal Building
915 Second Avenue
Seattle, WA 98174
Hours: 8:00 a.m. - 4:00 p.m.
Monday through Friday
Phone: (206) 553-4270
Fax: (206) 553-6717

U.S. Government Printing Office
Thomas P O'Neill Building
Room 169
10 Causeway Street
Boston, MA 02222
Hours: 8:00 a.m. - 4:00 p.m.
Monday through Friday
Phone: (617) 720-4180
Fax: (617) 720-5753

U.S. Government Printing Office
Room IC50, Federal Building
1100 Commerce Street
Dallas, TX 75242
Hours: 8:00 a.m. - 4:00 p.m.
Monday through Friday
Phone: (214) 767-0076
Fax: (214) 767-3239

U.S. Government Printing Office
100 West Bay Street
Suite 100
Jacksonville, FL 32202
Hours: 8:30 a.m. - 4:30 p.m.
Monday through Friday
Phone: (904) 353-0569
Fax: (904) 353-1280

U.S. Government Printing Office
Suite 150, Reuss Federal Plaza
310 W. Wisconsin Avenue
Milwaukee, WI 53203
Hours: 8:15 a.m. - 4:15 p.m.
Monday through Friday
Phone: (414) 297-1304
Fax: (414) 297-1300

U.S. Government Printing Office
1305 SW First Avenue
Portland, OR 97201-5801
Hours: 8:30 a.m. - 4:30 p.m.
Monday through Friday
Phone: (503) 221-6217
Fax: (503) 225-0563

U.S. Government Printing Office

Suite 124
One Congress Center
401 South State St., Suite 124
Chicago, IL 60605
Hours: 8:30 a.m. - 4:30 p.m.
Monday through Friday
Phone: (312) 353-5133
Fax: (312) 353-1590

U.S. Government Printing Office
1660 Wynkoop Street
Suite 130
Denver, CO 80202
Hours: 8:00 a.m. - 4:00 p.m.
Monday through Friday
Phone: (303) 844-3964
Fax: (303) 844-4000

U.S. Government Printing Office
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5600 E. Bannister Road
Kansas City, MO 64137
Hours: 10:00 a.m. - 9:00 p.m.
Monday through Saturday
12:00 a.m.- 6:00 p.m., Sunday
Closed on Easter, Thanksgiving and Christmas
Phone: (816) 765-2256
Fax: (816) 767-8233

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New York, NY 10278
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Fax: (212) 264-9318

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Cleveland, OH 44199
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Phone: (216) 522-4922

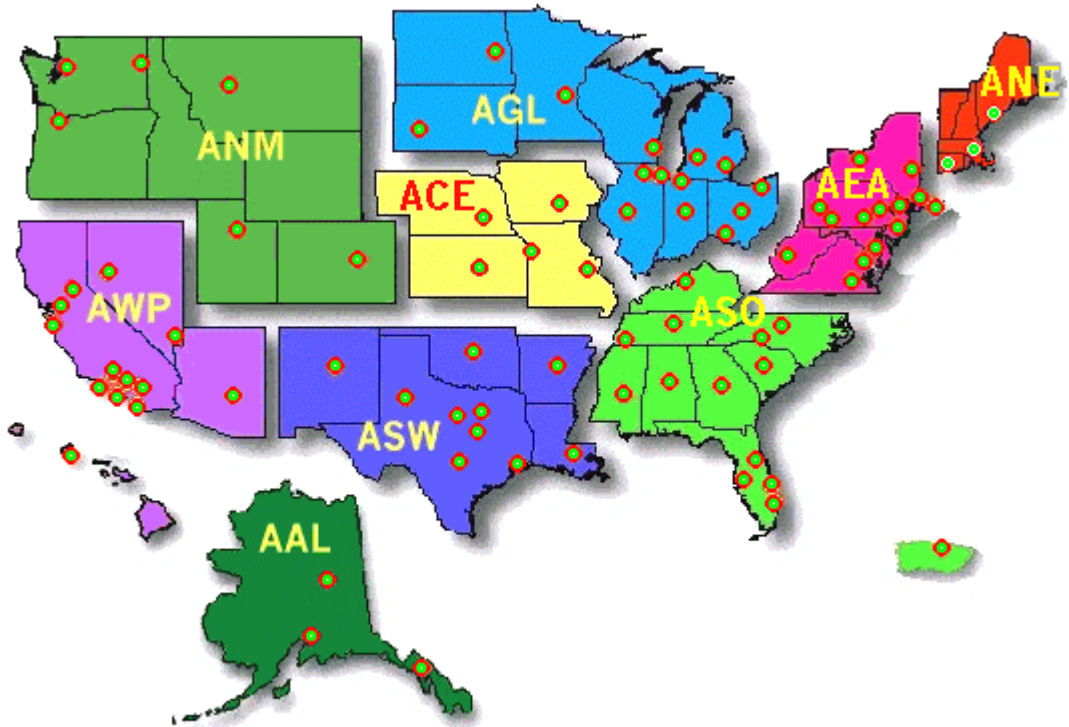
Fax: (216) 522-4714

APPENDIX VII FSDO LOCATIONS

(Included for Customer Reference only)

Flight Standards District Office (FSDO) Locator Map

(This and other Flight Standards Information found at
<http://www.faa.gov/avr/afshome.htm>)



Alaskan Region - AAL

Anchorage (ANC) FSDO
Fairbanks (FAI) FSDO
Juneau (JNU) FSDO

Central Region - ACE

Des Moines (DSM) FSDO
Kansas City (MCI) FSDO
Lincoln (LNK) FSDO
St. Ann (STL) FSDO
Wichita (ICT) FSDO

Eastern Region - AEA

Albany (ALB) FSDO
Allegheny (AGC) FSDO
Allentown (ABE) FSDO
Baltimore (BAL) FSDO
Charleston (CRW) FSDO

Pittsburgh (PIT) FSDO
Farmingdale (FRG) FSDO
Garden City (NYC) FSDO
Harrisburg (HAR) FSDO
Philadelphia (PHL) FSDO
Rochester (ROC) FSDO
Richmond (RIC) FSDO
Teterboro (TEB) FSDO
Washington (DCA) FSDO

**

Brussels Belgium IFO
Frankfurt Germany IFO
London England IFO
New York (JFK) IFO

Great lakes Region AGL

Detroit (DTW) FSD
Cincinnati (CVG) FSDO
Cleveland (CLE) FSDO
Columbus (CMH) FSDO
Grand Rapids (GRR) FSDO
Fargo (FAR) FSDO
Indianapolis (IND) FSDO
Milwaukee (MKE) FSDO
Minneapolis (MSP) FSDO
Rapid City (RAP) FSDO
Chicago (ORD) FSDO
South Bend (SBN) FSDO
Springfield (SPI) FSDO
West Chicago (DPA) FSDO

Southern Region - ASO

Birmingham (BHM) FSDO
Charlotte (CLT) FSDO
College Park (ATL) FSDO
Columbia (CAE) FSDO
Fort Lauderdale (FLL) FSDO
Jackson (JAN) FSDO
Louisville (LOU) FSDO
Memphis (MEM) FSDO
Miami (MIA) FSDO
Nashville (BNA) FSDO
Orlando (ORL) FSDO
San Juan (SJU) FSDO
Tampa (TPA) FSDO
Winston-Salem (INT) FSD

**

Miami (MIA) IFO

New England Region - ANE

Bedford (BOS) FSDO
East Boston (LOG) FSDO
Portland (PWM) FSDO
Windsor Locks (BDL) FSDO

Southwest Region - ASW

Albuquerque (ABQ) FSDO
Baton Rouge (BTR) FSDO
Dallas (DAL) FSDO
Dallas/Ft. Worth (DFW) FSDO
Ft. Worth (AFW) FSDO
Houston (HOU) FSDO
Little Rock (LIT) FSDO
Lubbock (LBB) FSDO
Oklahoma City (OKC) FSDO
San Antonio (SAT) FSDO

**

Dallas/Ft. Worth (DFW) IFO

Northwest Mountain Region ANW

Boise (BOI) FSDO
Casper (CPR) FSDO
Denver (DEN) FSDO
Helena (HLN) FSDO
Portland ((PDX) FSDO
Salt Lake City (SLC) FSDO
Seattle (SEA) FSDO
Spokane (SPO) FSDO

Western Pacific Region - AWP

Fresno (FAT) FSDO
Honolulu (HNL) FSDO
Las Vegas LAS) FSDO
Long Beach (LGB) FSDO
Los Angeles (LAX) FSDO
Oakland (OAK) FSDO
Reno (RNO) FSDO
Riverside (RAL) FSDO
Sacramento (SAC) FSDO
San Diego (SAN) FSDO
San Jose (SJC) FSDO
Van Nuys (VNY) FSDO
Scottsdale (SDL) FSDO

**

San Francisco (SFO) IFO
Singapore IFO

APPENDIX VIII. CHECKLIST FOR FINAL SIAP SUBMISSION

Airport/Heliport Name: _____
ID: _____

1. Date request received from proponent:
Date:____/____/____
2. Date acknowledgement letter and Standard SIAP data request package (if necessary) sent to proponent. Check here if N/A ____
Date:____/____/____
3. Meets eligibility requirements for SIAP IAW TERPS para 120b: Yes ____ No ____
4. Runway preference (or circling only) RWY _____ by proponent____
by FAA_____
5. Heliport certification letter from FSDO (If applicable) Check here if N/A ____ Date:____/____/____
(NOTE: Must state safe operations possible, ingress/egress routes,
adequate marking/lighting for night ops, weather/altimeter source, etc)
6. Significant (precipitous) terrain identified by proponent.
Yes ____ No_____
7. ALP sent to NOS for airport/runway data
Date:____/____/____
(For first time VFR to IFR conversion only)
8. NOS airport/runway data response received (NOAA Form 76-101)
Date:____/____/____
9. Data package forwarded to AVN-210 for AMIS/IAPA input.
Date:____/____/____
10. Environmental data/checklist received from proponent.
Date:____/____/____

A. CATEx, FONSI, or EIS written.
Date:____/____/____
11. Route SIAP coordination memo to Air Traffic and AF Divisions.
Date:____/____/____
(NOTE: These memos may not be required in all cases)
(Electronic memo's - i.e., e-mail - may be used if appropriate)

A. Received Air Traffic response.
Date:____/____/____

B. Received AF response.
Date:____/____/____

12. Route SIAP coordination memo to Airports Division/ADO.

Date:____/____/____

(Include filled out 7480-1, if applicable)

(Electronic memo's - i.e., e-mail - may be used if appropriate)

A. Airports Division response per AC 150/5300-13 and AC 150/5390-2A

(1) Airport/Heliport ARC designation _____

(2) Runway designation _____
(Precision, Non-precision, Visual, etc)

(3) Minimum VIS_____ statute mile.
(Per Table A16-1, AC 150/5300-13)

(4) Minimum HAT_____ feet.
(Per Table A16-1, AC 150/5300-13)

(5) All FAR Part 77 surfaces clear. Yes ____ No ____
(NOTE: If no, please state impact or limitation to procedures on separate sheet)

(6) Runway Approach Slope 20:1 clear. Yes ____ No ____
(NOTE: IF 20:1 is not clear, are obstructions lighted?) Yes ____ No ____

(7) Runway Approach Slope 34:1 clear. Yes ____ No ____
(NOTE: IF 34:1 is not clear, are obstructions lighted?) Yes ____ No ____

(8) Heliport 8:1 slopes clear. Yes ____ No ____
(NOTE: IF 8:1 is not clear, are obstructions lighted and safe ingress/egress routes defined by FSDO inspector?) Yes ____ No ____

B. VFR to IFR NRA number (If applicable) _____-_____-_____ - NRA

C. NRA Determination. No Objection _____Objection _____

13. VGSI installed _____ Angle _____ TCH _____
(NOTE: If Angle/TCH not available, state distance from VGSI bar to THLD _____ft.)

14. Wheel Height Group: (Per Order 8260.34, Appendix 1 or 8260.3B, Chg. 17, Table 18A)

Height Group (Check one below)	Wheel Height	Recommend TCH
	(TCH +/- 5 feet)	
1	<10 ft	40 ft

_____	2	15 ft	45 ft
_____	3	20 ft	50 ft
_____	4	25 ft	55 ft

15. ALP (3 copies received or copies made) Yes _____ No _____

16. Weather and/or altimeter sources.
Primary _____ Secondary _____

17. Docket Number (if known) if Airspace action required.

18. Memo indicating all NON-FED requirements satisfied. Yes ___ No ___

19. Standard SIAP request letter completed including attachments.
Yes _____ No _____
(Data sheets, ALP's, Environmental Checklists and RFO letter,
proponents request letter, etc)

20. Date sent forward to AVN-100 for procedure development.
Date:____/____/____
(File copy compiled and filed)

Specialists Name,
XXX Flight Procedures Office, XXX FPO

APPENDIX IX. Sample Environmental Impact Memo



Memorandum

U.S. Department
of Transportation
Federal Aviation
Administration

Subj ACTION: Environmental Impacts of
ect: Instrument Flight Procedures

Date
:

From Program Manager, XXX
: Flight Procedures Office, XXX FPO

Repl Specialist
y to Name, Telephone
Attn No.

.
of:

To: Manager, XXX Flight Procedures
Development Branch, AVN-1XX

The Following recommendation is for a Categorical Exclusion concerning the environmental impacts of the proposed instrument flight procedure (Name of Procedure) to the Name of Airport and ID, City, State

The following specific categorical exclusion provision or provisions apply:

Establishment of Global Positioning System (GPS) or Flight Management System (FMS) procedures that overlay existing procedures.

Procedures' actions and/or certification covered by a previously filed EIS or FONSI, when environmental circumstances have not changed.

Actions not designed to change the flight track(s) of jet aircraft over the ground, or not likely to cause a shift in noise contours over noise sensitive areas.

Action such as a new scheduled service that does not produce an increase of 15 percent or greater in operations with the same fleet mix for (example, percentages of small propeller, turboprop, turbojet, etc., similar to those that currently exist).

Actions involving the application of instrument approach procedures; in the context that an instrument approach will essentially follow existing VFR ground tracks at an equal or higher overall altitude.

Attached is additional supporting information regarding the environmental concerns for this proposal. (Environmental Checklist from proponent)

If you have any question concerning this matter, please call me at
(XXX) 123-4567.

Prepared by:
(Specialist Name),
XXX Flight Procedures Office, XXX FPO

The above review by the FAA, is determined to be categorically
excluded from further environmental documentation according to Order
1050.1 and those items specifically provided above, since none of the
extraordinary circumstance listed in Order 1050.1 apply to its
implementation.

This is taken pursuant to 49 U.S.C., Section 40101 et seq., and
constitutes an order of the Administrator which is subject to review
by the Courts of Appeal of the United States in accordance with the
provisions of 49 U.S.C., Section 46110.

Responsible Federal Official: /_/_/ Approved /_/_/ Disapproved

(Branch Managers Name)
Manager, XXX Flight Procedures
Development Branch, AVN-1XX

Date

APPENDIX - X

Memorandum

U.S. Department
of Transportation

Federal Aviation
Administration

Subject: ACTION: Request for Instrument Approach Procedure(s)

Date:

Reply to

From: Flight Procedures Office Program Manager, BOS FPO Attn. Of:

To: Manager, North East Flight Procedures Development
Branch, AVN-110

Please develop precision instrument flight procedures for:

City/State:

Airport:

Airport Ident:

1. Public Use ☐ Private Use ☐ Military ☐
Original ☐ Amendment ☐ N^o.

NDB

REMARKS:

2. Straight-in Runway: L Circling Only ☐

3. Aircraft Categories: A

4. Final Approach Course Navigational Aid:

Monitoring category 1 ☐ 2 ☐ 3 ☐ 4 ☐

Monitored by:

Monitoring hours:

5. Airport Altimeter Source:

Location: Type:

Service A (if applicable): Yes ☐ No ☐

Primary Source: FT ☐ PT ☐ Hours:

Secondary Source:

Service A (if applicable): Yes ☐ No ☐

Location: Type: Hours:

6. Terminal Weather Available Yes ☐ No ☐

Provided by: Hours:

Service A (if applicable): ☐ Yes ☐ No

Operator Approved Weather Service: Yes ☐ No ☐ Remarks:

6a. VGSI Angle: ° TCH: ft.

6b. Wheel Height Group: I

6c. Surfaces clear: 34:1: Yes 20:1: Yes

Penetrating obstacles lighted: Yes

7. Airspace Information:

- ☐ Airspace required.
Assigned Docket No.
(Procedure effective concurrent with airspace)
- ☐ Airspace adequate
(Procedure effective with routine effective date)

☐ Airspace requirements undetermined by this office.

Please determine and advise whether procedure requires airspace or may go routine. If airspace is necessary, advise us and we will provide docket number.

8. Special Instructions and Information

a. Point of Air Traffic contact:

Facility: Phone:

Fax: Email:

b. Point of airport contact:

Name: Phone:

Fax: Email:

c. The following, if left blank, is at Procedure Developer's discretion

Final Approach Course:

Course reversal:

Initial:

Feeder:

Airway:

Direct FAR Part 95:

Direct Non Part 95:

Missed approach/holding fix:

IFR departure required Yes ☐ NO ☐ ☐ NA for this request

☐ Standard ☐ RNAV ☐ FMS

Type: Diverse Direction: Left

Departure Instructions:

d. Other Remarks and Information:

9. *Data Airport Data in IAPA/AMIS ☐ Yes ☐ No

Runway Data in IAPA/AMIS ☐ Yes ☐ No

Facility Data in IAPA/AMIS ☐ Yes ☐ No

* See APPENDIX 1 if data not already in IAPA/AMIS.

10. Environmental Requirements Fulfilled ☐ Yes ☐ No
 (see para 15)

11. Non-Fed Facility ☐ ☐ ☐
Yes ☐ No

 All Non-Fed requirements met ☐ Yes

☐ No

Reimbursable agreements ☐ Yes ☐

No ☐ NA

Non-Fed agreements executed by AF ☐ Yes ☐ No

12. Priority. Establish priority as follows or refer to paragraph 7.

☐ Routine

☐ Hard Date:

☐ Proposed Date:

☐ Concurrent Date:

☐ Other

Justification:

13. ALP or equivalent enclosed. ☐

Yes ☐ No

☐ New IFR Airport (two copies enclosed)

14. Form 5010 enclosed ☐ Yes ☐ No

15. Prepared CAT X for AVN signature enclosed ☐Yes ☐No

16. Airport Use:

- ☐ General Aviation.
- ☐ Part 135 Operations (Unscheduled)
- ☐ Part 135 Operations (Scheduled)
- ☐ Part 121 Operations
- ☐ Military Operations
- ATA/ALPA ☐ APA☐

17. Remarks:

17a. Remove Overlay: ☐Yes ☐No SIAP NAME:

18. Should you have any questions, please contact:

Name:

Phone:

Flight Procedures Office Program Manager

Attachments

APPENDIX XI Proponent Acknowledgement Letter

Name of Airport
Airport Managers Name
Address 1
City, St. Zip

Date:

Dear.....:

We are pleased to inform you that your recent request for a (Insert Name of Approach) at (Insert Name of Airport, City, St) has been approved and forwarded to the procedures development office for design, flight check, and final publication.

Due to the overwhelming number of procedure requests nationwide, we are unable, at this time, to estimate an exact publication date. It would not be unusual to have approximately twelve to fifteen months before actual publication. However, if the backlog of requests diminishes, or additional resources become available, your approach request may be published sooner.

If this time frame is unacceptable, please contact your state aviation department, and if they would like to reprioritize the procedure requests within your state, we will gladly comply with their wishes.

Should you have any questions regarding this request, or any other questions regarding instrument procedures, please contact us at (123) 456-6789.

Sincerely,

Name
Program Manager,
XXX Flight Procedures Office, XXX FPO

APPENDIX XII. Category III ILS Checklist for Ground Facilities

AIR TRAFFIC DIVISION

Category III ILS Checklist for Ground Facilities

Equipment for (Enter Official Name of Airport) , Runway (Enter runway number) , is installed with the capability to provide Category III ILS approach/landing minimums to (Enter lowest RVR authorized) RVR.

We must confirm that all ground systems and obstacle clearance requirements contained in FAA AC 120-29, Appendix 2, and AC 120-28 are met. In order to expedite this process, separate checklists for each Division and Flight Inspection Operations are provided. Completion of this checklist MUST reflect achieved/completed status - NOT PLANNED ACTIONS. When all portions of this checklist are complete, please return the checklist expeditiously to the Kansas City Flight Procedures Office (MKC FPO) in order to preclude delay of Category III service to the users. Once approval is granted, ACE-200 will issue authorization for Category III operations.

Please provide the MKC FPO, (816) 426-3297, with the name and telephone number of your CAT II/III coordinator for monitoring the accomplishment of this checklist.

I. General Data

A. Location: (Enter Official City and State Name)

B. Airport: (Enter Official Airport Name and four Letter Ident)

C. Runway: (Enter full runway number)

II. ATCT, Order 7110.65, "Category III ILS Operational Requirements"

Drafted and coordinated with Airways Facilities Division,
Airports Division, Flight Standards Division and
(Enter Name of Airport).

III. Monitor capability (AC 120-29, Appendix 2)

Verify that monitoring capability exists in ATCT for:

Both (dual) Localizers: (Y / N)

Both (dual) Glide Slopes: (Y / N)

Outer Marker/Facility providing final approach fix:
(Y / N)

Engine Generators: (Y / N)

RVR's: (Touchdown, Midpoint, and Rollout) (Y / N)

Runway Lights: (Edge, TDZE, Centerline) (Y / N)

Integrity and Continuity Test Circuits (Y / N)

IV. Coordination AC 120-29, Appendix 2)

Arrangements for airport personnel to advise ATCT whenever the runway lighting system does not meet Category II or III operational requirements.

(Y / N)

Arrangements to start engine generators at Approach Lighting System (ALS) and power vault, or an approved electrical monitoring system installed to ATCT.

(Y / N)

V. Communications AC 120-28, para 8 and Order 7110.65

Air Traffic Control Tower: Positive Control of Aircraft and Ground Vehicles on Runway and Landing Surface Critical Areas (AC 120-28, para 8; AC 150/5340-1E; and Order 7110.65)

(Y / N)

Facility Outages/Airport Conditions (Order 7110.65, para 2-9) reported by Voice/NOTAM.

(Y / N)

Manager, ATCT

(Date)

(Signature)

CAT II/III Coordinator

(Date)

(Signature)

Manager, Air Traffic Division

(Date)

(Signature)

FLIGHT INSPECTION OPERATIONS
Category III ILS Checklist for Ground Facilities

Equipment for (Enter Official Name of Airport) , Runway (Enter runway number) , is installed with the capability to provide Category III ILS approach/landing minimums to (Enter lowest RVR authorized) RVR.

We must confirm that all ground systems and obstacle clearance requirements contained in FAA AC 120-29, Appendix 2, and AC 120-28 are met. In order to expedite this process, separate checklists for each Division and Flight Inspection Operations are provided. Completion of this checklist MUST reflect achieved/completed status - NOT PLANNED ACTIONS. When all portions of this checklist are complete, please return the checklist expeditiously to the Kansas City Flight Procedures Office (MKC FPO) in order to preclude delay of Category III service to the users. Once approval is granted, ACE-200 will issue authorization for Category III operations.

Please provide the MKC FPO, (816) 426-3297, with the name and telephone number of your CAT II/III coordinator for monitoring the accomplishment of this checklist.

I. General Data

- A. Location: (Enter Official City and State Name)
- B. Airport: (Enter Official Airport Name and four Letter Ident)
- C. Runway: (Enter full runway number)
Length: _____ Width: _____
- D. Runway Gradient: (Enter Percent up or down)
- E. Runway surface type: (Concrete, Asphalt, Concrete/Asphalt Mix)
- F. Runway grooving: (Y / N)
- G. Glide Slope Angle: (State Flight Check G/S Angle)

II. Flight Inspection Tolerance Met (Ref: OA P 8200.1)

- Localizer #1 (Y / N) Localizer #2 (Y / N)
- Glide Slope #1 (Y / N) Glide Slope #2 (Y / N)
- Outer Marker (Y / N)
- Middle Marker (if present) (Y / N)

Inner Marker (Y / N)

ALSF-1 or 2 Approach Lighting System (Y / N)

Radio Altimeter Setting Height (Y / N)

TCH Crossing Height (Y / N)

CAT III (a,b,c) to ILS Point "E" (Y / N)

Missed Approach (Y / N)

Latest Flight Insp Report attached: *(Required by MKC FPO and AFS)* (Y / N)

III. CAT III (a,b,c) Performance Classification (Ref. Order 6750.24, para 7 and Appendix 7)

Performance Class is: _____ for CAT III a, b, c ops. (circle one)

IV. CAT III ILS Standard Instrument Approach Procedure (Ref. 8260.3B; 8260.19; AC 120-29, appendix 2)

State the current published SIAP Name, Amdt No, and date

SIAP Name: _____ Amdt _____ Date _____

Proposed or Actual Publication date for CAT III SIAP:

_____ CAT III SIAP formulated in accordance with approved criteria based upon _____ data supplied by the MKC FPO and other authorized sources. (Y / N)

Obstruction Clearances Provided (AC 120-29, Appendix 2) (Y / N)

4) Final Approach Surface Outer Section Clear (AC 120-29, para (Y / N)

Missed Approach Area Satisfactory (AC 120-29, para 9) (Y / N)

Section 1 and 2 (40:1) Clear (Y / N)

Turning Area (40:1) Clear (Y / N)

Secondary Area (12:1) Clear
(Y / N)

Manager/Supervisor, Flight Inspection Operations

_____ signature
date
CAT II/III Coordinator or Flight Procedures _____
Branch Manager/Supervisor (Date)
(Signature)

AIRPORTS DIVISION
Category III ILS Checklist for Ground Facilities

Equipment for (Enter Official Name of Airport) , Runway (Enter runway number) , is installed with the capability to provide Category III ILS approach/landing minimums to (Enter lowest RVR authorized) RVR.

We must confirm that all ground systems and obstacle clearance requirements contained in FAA AC 120-29, Appendix 2, and AC 120-28 are met. In order to expedite this process, separate checklists for each Division and Flight Inspection Operations are provided. Completion of this checklist MUST reflect achieved/completed status - NOT PLANNED ACTIONS. When all portions of this checklist are complete, please return the checklist expeditiously to the Kansas City Flight Procedures Office (MKC FPO) in order to preclude delay of Category III service to the users. Once approval is granted, ACE-200 will issue authorization for Category III operations.

Please provide the MKC FPO, (816) 426-3297, with the name and telephone number of your CAT II/III coordinator for monitoring the accomplishment of this checklist.

I. General Data

- A. Location: (Enter Official City and State Name)
- B. Airport: (Enter Official Airport Name and four Letter Ident)
- C. Runway: (Enter full runway number)
Length: _____ Width: _____
Stop/Clearway: _____ ft.
Takeoff Distance Available: _____ ft.
Takeoff Run Available: _____ ft.
- D. Runway Gradient: (Enter Percent up or down)
- E. Runway surface type: (Concrete, Asphalt, Concrete/Asphalt Mix)
- F. Runway grooving: (Y / N)

II. Lighting Aids Installed on this Runway (AC 120-29, Appendix 2)

- A. High Intensity Runway Lights
(Y / N)

N) B. Threshold and Runway End Lights (Y /

C. Touchdown Zone and Centerline Lights
(Y / N)

N) D. Taxiway Centerline Lights (Y /
*(Required only when operations less than 600 RVR are
planned)*

E. Organization responsible for Monitoring lights during
CAT II/III weather conditions/operations.

Organization Name:

III. CAT II/III Runway Markings Installed
(Y / N) Condition: Good _____ Fair _____
Poor _____

IV. CAT II/III ILS Critical Areas Marked
Critical areas as identified in the following: (Order
6750.16, para 8-13; AC 150/5340-1F, Appendix 1, Figure 8;
Order 7110.65, para 3-84)
(Y / N) Condition: Good _____ Fair _____ Poor

V. Obstruction Clearances (AC 120-28, para 8 and AC 120-29,
Appendix 2,
para 4-13)

*NOTE: Certification should be obtained from sponsor by
Airports Division*

A. Final Approach Surface
I. Inner Section Clear 50:1 out to 10,000 feet
(Y / N)

2. Transitional surfaces 7:1 Clear
(Y / N)

B. Approach Light Area
1. 50:1 Surface Clear
(Y / N)

2. Light Plane/Lane Clear (Y /
N)

C. Touchdown Power Source Code Area

1. Clear of objects not required for ILS CATII/III
fixed by functional purpose.
(Y / N)

D. Visual Aids Clear Power Source Code

1. Touchdown Area Transitional Surfaces (7:1) Clear
(Y / N)

VII. Electrical Power Requirements (Order 6950.2)

Component

Power Source Code

Runway Centerline Lights _____

Touchdown Zone Lights _____

High Intensity Edge Lights _____

Manager, Airport Safety & Standards Branch _____

(Signature)

(Date)

CAT II/III Coordinator _____

(Signature)

(Date)

Manager, Airports Division _____

(Signature)

(Date)

AIRWAYS FACILITIES DIVISION
Category III ILS Checklist for Ground Facilities

Equipment for (Enter Official Name of Airport) , Runway (Enter runway number) , is installed with the capability to provide Category III ILS approach/landing minimums to (Enter lowest RVR authorized) RVR.

We must confirm that all ground systems and obstacle clearance requirements contained in FAA AC 120-29, Appendix 2, and AC 120-28 are met. In order to expedite this process, separate checklists for each Division and Flight Inspection Operations are provided. Completion of this checklist MUST reflect achieved/completed status - NOT PLANNED ACTIONS. When all portions of this checklist are complete, please return the checklist expeditiously to the Kansas City Flight Procedures Office (MKC FPO) in order to preclude delay of Category III service to the users. Once approval is granted, ACE-200 will issue authorization for Category III operations.

Please provide the MKC FPO, (816) 426-3297, with the name and telephone number of your CAT II/III coordinator for monitoring the accomplishment of this checklist.

I. General Data

A. Location: (Enter Official City and State Name)

B. Airport: (Enter Official Airport Name and four Letter Ident)

C. Runway: (Enter full runway number) Length: _____
Width: _____

D. Runway Gradient: (Enter Percent up or down)

E. Runway surface type: (Concrete, Asphalt, Concrete/Asphalt Mix)

F. Runway grooving: (Y / N)

G. State the as-built Approach Lighting System Vertical Profile or attach a copy of the as-built vertical profile drawings.

Profile: _____ or Drawings Attached: (Y / N)

H. Glide Slope Angle and TCH (Computed and/or Flight Check Value)

Angle: _____ TCH: _____

II. ILS SYSTEM (Ref. AC 120-28 and 120-29, Order 6750.24)

A. Localizer/Glide Slope equipment type with dual transmitters installed.

Localizer Type: _____

Far Field Monitor Installed: (Y / N)

Glide Slope Type: _____

B. Performance Classification (Ref. 6750.24): *(Circle one of the following)*

III/D/3

IIIE/3

III/E/4

Chap 5) C. Land Line Monitors Installed (Loc/GS) (Ref. 6750.16,

(Y / N)

D. Integrity and Continuity Test Circuit remotored to ATCT.

(Y / N)

E. Marker Beacons Monitored. (Y / N)

NAD 83 Data:

However, if Middle Marker: (Not required for CAT II/III) installed, state the Lat/Lon and distance to threshold:

_____ Latitude _____ Longitude

ft. Distance to Approach/Landing Threshold _____

CAT III) Inner Marker: (Required for CAT II but not for

_____ Latitude _____ Longitude

ft. Distance to Approach/Landing Threshold _____

F. Remote Control/Status Indicator Equipment Installed (Ref. 6750.24) (Y / N)

G. Approach Lighting System Installed (Ref. Order 6750.2)

Type ALS Installed: _____

Monitored: (Y / N)

Commissioning Flight Check completed: _____
(Date)

III. Transmissometers - RVR (Touchdown, Midpoint, Rollout)
(Ref. Orders 6750.24 and 6560.10)

Type equipment _____
(Make & Model)

Touchdown _____ ft
(Baseline)

Midpoint _____ ft
(Baseline)

Rollout _____ ft
(Baseline)

Lowest Readable RVR Value _____ ft

IV. Electrical Power Requirements (Ref. Order 6950.2)

<u>Component</u>	<u>Power Source Code</u>
Localizer	D* (Y / N)
Glide Slope	D* (Y / N)
RVR (Touchdown)	D(1) (Y / N)
RVR (Midpoint)	D(1) (Y / N)
RVR (Rollout)	D(1) (Y / N)
FFM (Loc)	D (Y / N)
Outer Marker	D* (Y / N)
Middle Marker (Not required - If installed so indicated)	D* (Y / N)
Inner Marker (Not required for CAT III - If installed so indicated)	D* (Y / N)
Approach Lighting System	1# (Y / N)

Note: *Requires uninterrupted transfer# Requires one
(1) second transfer

V. Obstruction Clearance(Ref. AC 120-29, App. 2, para 4,6,7 9:
AC 120-28, para 8)

A. Glide Slope Antenna (Clearances Met) (Y / N)

B. Other Associated Structures (Clearances Met) (Y / N)

Manager, Airway Facilities Sector	_____	
_____	(Date)	(Signature)
CAT II/III Coordinator	_____	
_____	(Date)	(Signature)
Manager, Airway Facilities Division	_____	
_____	(Date)	(Signature)